

DEVELOPING THE RESIDENTIAL MORTGAGE MARKET

A report prepared by J. V. Poapst
for Central Mortgage and
Housing Corporation



Volume I A Residential
Mortgage Market Corporation

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Volume 1
A Residential Mortgage Market
Corporation

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Foreword

In 1970, a Special Project Team was set up jointly by the Minister of State for Urban Affairs and Central Mortgage and Housing Corporation, to research and formulate legislative proposals on possible new financing mechanisms in the mortgage market. Three basic possibilities were examined by the team. These were the formation of a residential mortgage market corporation, the formation of mortgage investment companies, and variable terms mortgages.

It was considered that the studies and materials produced to aid the Project Team in its deliberations might well be of interest to a wider public. Accordingly, the research material related to each of the three mechanisms is presented in volumes I, II, and III, respectively, in this series.

Much of the material contained in these volumes is new, and that which has been reworked is presented in a new way. It should provide a helpful knowledge base for public discussion, and it has already proved most useful in legislative discussion. It should also be of considerable interest to the Canadian academic world and, to a more limited extent, on the international scene.

As a matter of interest, the Residential Mortgage Financing Act, Bill C-135, was introduced in the House of Commons on February 1, 1973. The new bill provided for the establishment of a mortgage market corporation, as is discussed in Volume I in this series. It provided also for the formation of private mortgage investment companies, which form the subject of Volume II.

Acknowledgments

This study is the result of the labors of numerous individuals. Mr. E. D. L. Miller, Treasurer, Canada Trust Huron and Erie, was study leader for the project. He played the primary role in developing our Interview Survey of Lending Institutions and Investment Dealers on a Central Mortgage Bank Proposal, and in planning and conducting the fieldwork for the project. In addition, he contributed memoranda which are the basis of Chapter 3, parts V and VI, and Chapter 4, part I.

Professor H. H. Binhammer, Department of Economics, Royal Military College, prepared chapters 2 and 3, and appendices D and E. Mr. G. A. Golden, of the Sun Life Assurance Company, contributed Chapter 4, part II. Dr. J. A. Galbraith, Royal Bank of Canada, contributed part III of the same chapter. Professor W. R. Waters, Faculty of Management Studies, University of Toronto, prepared Chapter 5. Mr. C. W. Goldring, Executive Vice President, A.G.F. Management Limited and American Growth Fund Limited, provided three memoranda for use in the preparation of Chapter 5. Professor Waters and I shared the task of developing and managing the mail questionnaire survey of residential mortgage investments by trustee pension funds, the results of which are presented in Appendix C. Mr. Harry Weitz, Statistics Canada, gave us valuable guidance in developing the questionnaire and expeditiously provided special tabular information required for Chapter 5. Chapter 6 is the work of Professor Paul Halpern, Faculty of Management Studies, University of Toronto.

Dr. E. Sussman, Assistant Director, Economics and Statistics Division, Central Mortgage and Housing Corporation, supervised the preparation of Appendix A and edited the galley proofs. Most important, his extensive knowledge of government housing and mortgage market policy in Canada and the United States was available to the Special Project Team throughout its work. Mr. Roger Simard, Economics and Statistics Division, Central Mortgage and Housing Corporation, prepared Appendix B.

Mr. T. F. Tyson, President, Long Range Planning Limited, was Coordinator of the Special Project Team, and in that capacity furthered our work on this study in a variety of ways. Messrs. Binhammer, Simard, Sussman, and Tyson participated with Mr. Miller in designing and conducting the interview survey.

As Leader of the Special Project Team, Mr. M. J. C. Boyd, of Boyd, Stott, McDonald Limited, participated in the work on the residential mortgage market corporation throughout the project. He led many discussions on problems of developing the residential mortgage market, the range of which is indicated in the extract from his memorandum reproduced in Chapter 1.

Many officials of the Federal Government and of private lending institutions shared their views with us.

As Research Director for the Special Project Team, I wish to thank all the above persons for their assistance in our research work.

The usual caveat applies that opinions expressed in this volume are those of the individuals concerned and do not necessarily represent the views of the institutions with which they are associated.

Finally, special thanks are due to Christine Purden for editing the manuscript.

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Chapter 1

Introduction

by J. V. Poapst

The primary function of the capital market is to transfer funds from households, businesses, governments, or other organizations with money surpluses to similar types of organizations with money deficits. The terms and conditions on which funds are transferred depend upon the ease with which the associated financial instruments can be traded subsequently by investors. In the case of residential mortgages, marketability is low compared to the other leading long-term financial instruments, bonds and stocks. This condition restricts the private supply of residential mortgage money and raises its cost.

There are two possible approaches to easing the restrictive effect of low marketability. One is to try to develop the secondary market for residential mortgages. The other is to reduce the need for marketability by enlarging collateral loan facilities for borrowing on the security of residential mortgage assets. This study explores a proposal to form a residential mortgage market corporation which would be empowered to pursue both approaches.

This volume is the first in a series of three based on selected materials prepared for the Special Project Team on New Financing Mechanisms and Institutions, formed in CMHC in 1970. The Project Team was assigned the task of exploring means for increasing the access of private investors to housing finance. In particular, it was asked to examine three possible innovations in the residential mortgage market.

The first was a residential mortgage market corporation (RMMC), originally referred to in our work as a central mortgage bank. The second was mortgage investment companies (MICs), which would be analogous to the closed and open-end investment funds that invest primarily in corporate shares. These institutions were originally referred to in our work by the name of their American counterpart, real estate investment trusts (REITs). The third possible innovation was variable terms mortgages (VTMs). In a VTM, provision is made for the variation of specified terms of the loan, especially the interest rate and the amortization period, on a predetermined basis during the lifetime of the contract. Such loans are often

more narrowly described as variable interest rate mortgages (VRMs). In this three-volume series, one volume is devoted to each project.

The work of the Project Team culminated in the presentation to the Federal Government of recommendations for the adoption of all three measures as devices for improving the volume, terms, and conditions of private finance for housing in Canada. In May 1972, Bill C-209, the Residential Mortgage Financing Act, was introduced in the House of Commons by the Minister of State for Urban Affairs;¹ the legislation was reintroduced with some changes as Bill C-135, on February 1, 1973. This Act would provide for the creation of an RMMC as a Crown corporation and for the creation of MICs as a special form of loan company. Bill C-135 makes no provision for VTMs.

Together, the three volumes in this series represent a substantial part of the materials prepared for the purpose of examining the proposals and making the recommendations.

I. GOVERNMENT HOUSING POLICY AND THE MORTGAGE MARKET²

Federal Government housing policy seeks to assist Canadians in achieving higher housing standards. Improving housing standards for a rapidly growing, mobile population requires a high level of residential construction. This in turn implies a large demand for residential mortgages, the principal instrument for financing residential capital formation. In addition, a large and ever-growing supply of mortgage funds is needed to finance the turnover of the existing housing stock that occurs when households adjust their accommodation to changing needs and circumstances. At any point in time, overall housing standards are determined by matching the characteristics of new and existing housing stock to the needs and preferences of the population which occupies it. Housing standards thus depend upon the volume, terms, and conditions of available mortgage money.

In pursuing its housing objectives, the Federal Government has long sought to increase private participation in financing new housing. Indeed, this was a purpose of the Housing Acts from their beginning in 1935. It was the primary reason for admitting the chartered banks to National Housing Act (NHA) lending in 1954, and for the concurrent switch from joint private and public lending to insured private lending. Unlike the Government's Pool Guarantee System, which protected the private lender's share of the joint loan against loss, loan insurance was made transferable so that investors unwilling or unsuited to participate in the original market could acquire NHA loans through secondary market purchases.

In the 1960s, several steps were taken to improve the private supply of residential mortgage funds. Central Mortgage and Housing Corporation tried

¹ The Honourable Ron Basford, *The Residential Mortgage Financing Act, Notes on Bill C-209*, Introduced in the House of Commons, May 15, 1972. For sections on the RMMC, see Appendix F of this study.

² The content of sections I to V, inclusive, of this chapter is almost identical for all three volumes in the series. Readers who are familiar with this material may prefer to skip to the last section, which outlines the contents of the present study.

to broaden investor interest in NHA mortgages by conducting a series of auctions of loans from its portfolio. To elicit their participation in the market investment, dealers were invited to bid. Altogether, thirteen auctions were held in the period January 1961 to May 1965, in which over \$300 million of NHA mortgages were sold. (See *Table A-23*.) Rising interest rates and tight money led to a halt in the series. It was not resumed. To improve the liquidity of the NHA mortgage market, a Mortgage and Loans Purchase Fund of \$100 million was established in December 1962, to permit CMHC, under the provisions of Section 11 of the National Housing Act, to function as the lender of last resort. The terms of borrowing were established on a relatively punitive basis—"suicide financing" as one practitioner described them—and the facility has never been aggressively used. Although not too much should be claimed for the contribution of these two measures to the development of the residential mortgage market, they were antecedents of the two functions proposed for the RMMC.

At one time, the NHA and chartered bank loan interest rates were both subject to ceilings. Conditions governing the NHA rate provided for a change in ceiling from time to time, but required that whenever a new rate was struck it must not exceed the prevailing rate on long-term Canada bonds by more than $2\frac{1}{4}$ percent. The ceiling for chartered bank loans was 6 percent. In December 1959, when the NHA ceiling was raised to $6\frac{3}{4}$ percent, the chartered banks, which were legally able but tactically unable to continue lending at 6 percent, withdrew from the field. The revision of the Bank Act in May 1967 enabled the chartered banks to resume full-scale NHA lending, and authorized them to engage in conventional lending on a restricted basis.

Subsequently, NHA-insured mortgage lending was made more attractive. In three steps, culminating in June 1969, the interest rate was freed so that approved lenders would not be periodically diverted from the field by an unattractive maximum rate. In July 1969, the five-year renewable NHA loan was introduced to appeal to medium-term lenders, especially trust and loan companies. At the same time, equity participation loans were permitted on rental housing to adapt the insured loan to the needs of lenders seeking to protect their funds from erosion by inflation. In February 1968, the lock-in period for rental loans was lengthened to appeal to long-term investors.

Meanwhile, action was taken to ease the non-interest terms of mortgage borrowing. The maximum amount of an NHA loan was raised in progressive steps to the current level of \$25,000³ for a single-family dwelling to prevent undue increases in downpayment requirements as the price of houses increased. The maximum loan to value ratios on NHA loans were increased in progressive steps to 95 percent of the first \$20,000 and 80 percent of the remainder, again to cut downpayment requirements. To lower monthly payments, the maximum amortization period on NHA loans was lengthened from thirty-five years to forty years. Existing houses became eligible for

³ Changes in the National Housing Loan Regulations on August 24, 1972, raised the maximum loan to \$30,000 and the loan ratio to 95 percent of value.

NHA-insured loans in several stages. Finally, the maximum loan to value ratio on conventional loans by federally registered insurance companies and loan and trust companies was raised to 75 percent. Private mortgage loan insurance was authorized, and for such insured loans, the maximum loan to value ratio was 90 percent. These changes increased the demand for mortgage funds.

The net effect of all these measures was that the Federal Government continued to provide large amounts of mortgage funds. Mortgage loans approved under the National Housing Act (1954), during the period 1954 to 1971, totaled \$15.4 billion. Of this sum, \$8.8 billion, or 57 percent, was provided by private lenders and \$6.6 billion, or 43 percent, was approved by CMHC. Of CMHC's share, 64 percent was for private housing for sale or rental at market prices, and 36 percent was for rental to low-income households at sub-market rents, or for other special purposes.⁴

II. OUTLOOK FOR DEMAND AND SUPPLY OF FUNDS IN THE MORTGAGE MARKET

Long-term projections of housing requirements in the 1970s, prepared in CMHC and based on demographic variables, pointed to a need for higher levels of house building if housing standards were to continue to improve.⁵ In the Speech from the Throne opening the Second Session of the 28th Parliament in 1969, the Government committed itself to a house-building program of one million dwelling units in the five-year period 1970 to 1974. This was 19 percent more than the number of units completed in the preceding five years. In its *Annual Report* for 1970, CMHC observed that even this volume of house building would not maintain the rate of improvement in housing standards that had been achieved in recent years.⁶

Whether housing standards were to improve at a lower rate, at the old rate, or at a higher rate, a higher demand for mortgage funds was in prospect. Long-term projections of the demand for NHA and conventional funds, prepared in 1970 by CMHC for internal use, pointed to an even greater need of public funds in future years if Government housing objectives were to be met.⁷ The Government did not wish to be committed to such levels of mortgage lending for households which could afford adequate housing on a self-supporting basis. It wished to concentrate more of the resources it devoted to housing to the low-income field. It also wished to reduce the cost

⁴ Central Mortgage and Housing Corporation, *Canadian Housing Statistics—1971* (Ottawa: CMHC, 1972), p. 23.

⁵ Albert B. Goracz, *Housing Requirements to 1981*, Technical Paper No. 3, Central Mortgage and Housing Corporation, February 4, 1969, *mimeo*.

⁶ Central Mortgage and Housing Corporation, *Annual Report, 1970* (Ottawa: CMHC, 1971), p. 8.

⁷ The projection indicated that if recent trends persisted, the proportion of annual expenditures on new housing which was financed by mortgages from major lending institutions would decline from about one-half of total expenditures in 1969 to about two-fifths of an estimated \$5 billion of expenditures in 1975. J. V. Poapst, "R and D in the Mortgage Market", in *Mortgage Investments for Trusteed Pension Plans* (Ottawa: Central Mortgage and Housing Corporation, 1971), p. 60.

of financing new housing.⁸ There was thus a desire to increase the access of private savings to housing finance.

Meanwhile, structural changes were occurring in financial intermediation which raised uncertainties about the prospective long-term rate of growth in the private supply of mortgage funds. Total assets of trust and loan companies grew at a higher rate in the 1960s than they had in the 1950s, and both types of institutions had high ratios of mortgage loans to total assets (*Table 1-1*). Trust and loan companies, however, are the smallest of the major financial intermediaries which engage actively in mortgage lending. Life insurance company mortgage holdings in 1970 were 15 percent greater than those of loan and trust companies combined, a product of 50 percent greater total assets and a mortgage to asset ratio more than three-quarters as high.

Life insurance companies had long been the backbone of the supply of mortgage funds for new residential construction, but their assets grew at a slower rate in the 1960s than in the 1950s. An important reason for the slowdown in growth was the rise of the trustee pension funds. Pension savings that once would have gone into group annuities now frequently flow into uninsured pension plans. From 1960 to 1970, while life insurance company assets increased by only 89 percent, trustee pension fund assets increased by 209 percent. By 1970, the latter's assets were about two-thirds the size of life insurance company assets, and as large as the assets of loan and trust companies combined. By 1970, only 9 percent of trustee pension fund assets were in mortgages, exclusive of the small amount held through pooled funds.

The chartered banks are by far the largest financial intermediaries. Their total assets in 1970 were about two-thirds of the total for all major lending institutions and trustee pension funds combined. Their assets grew at a higher rate in the 1960s than in the 1950s. Their return to the NHA mortgage field in 1967 and their new authority to engage in conventional lending, acquired at the same time, obviously had major positive implications for the growth of the private supply of residential mortgage funds.

In the context of 1970, it was not altogether clear how large a contribution the chartered banks could be expected to make in the years immediately ahead. Only 3 percent of their total assets were invested in mortgages at that time. Their volume of loan approvals was rising in 1970, but it had declined in 1969 from the preceding year. Major banks had set up mortgage subsidiaries to tap additional funds specifically for the mortgage market,

⁸ In introducing Bill C-209, the Minister of State for Urban Affairs described recent policy for housing finance as follows:

Federal Government policies over the last several years have been directed toward generating new sources of money to finance construction of residential property. The purpose has been threefold:

- a) To ensure a strong and adequate supply of private mortgage capital to fill the needs of home buyers of middle and moderate incomes;
- b) To permit Federal Government funds to be increasingly applied to the provision of housing for low-income groups and senior citizens, whose needs cannot be filled through freeplay of market forces;
- c) To reduce where possible the cost of funds for financing residential construction.

The Honourable Ron Basford, *The Residential Mortgage Financing Act*, p. 1.

by the issue of debentures and short-term paper backed by the mortgage portfolio of the subsidiary company. This, however, was the area of financial intermediation long engaged in by the trust and loan companies, so that substantial expansion of the bank subsidiaries would be financed partly at the expense of asset growth of traditional intermediaries which were heavily committed to mortgage lending.

Table 1-1

**INDICATORS OF STRUCTURAL CHANGE IN THE SUPPLY OF
RESIDENTIAL MORTGAGE FUNDS BY FINANCIAL INTERMEDIARIES
CANADA, 1970**

<i>Intermediary</i>	<i>Increase in Total Assets %</i>		<i>% of Total Assets in 1970</i>		<i>Mortgages¹ as % of Total Assets—1970</i>
	<i>1950-60</i>	<i>1960-70</i>	<i>Excl. T.P.F.s</i>	<i>Incl. T.P.F.s</i>	
Life Insurance Companies	102	89	21	18	50
Trust Companies	207	404	9	8	58
Loan Companies	126	313	5	4	76
Trust and Loan Companies	167	367	14	12	65
Chartered Banks	79	180	65	57	3
Total Lending Institutions	91	168	100 ²	87	22
Trusted Pension Funds	—	209	—	133	94
Total	—	171	—	100 ⁴	20

¹ Includes non-residential.

² \$72,867 million.

³ \$11,059 million of which \$1,022 million were mortgages exclusive of holdings via pooled funds.

⁴ Not including mortgages in pooled funds. Pooled funds were 7.3% of total assets.

Source: Appendix A, tables A-6, A-7, and A-8.

III. THE MORTGAGE MARKET AND TIGHT MONEY

The five-year housing program got off to a slow start. Activity declined in the residential mortgage market. The amount of loans approved by lending institutions for new construction decreased by 17 percent from 1969 to 1970. Dwelling unit starts decreased by 9 percent to 191,000 units. The drop would have been larger if there had not been a large increase in direct lending by CMHC in the second half of the year. Of the total NHA mortgage loans approved in 1970, \$903 million or 53 percent were CMHC loans, a proportion well in excess of the long-term average noted above. This was the highest level of government lending in Housing Act history.

Tight money conditions, of course, were an important cause of the reduced level of activity in the residential mortgage market. Among private borrowers, purchasers of housing (for owner occupancy or rental) are relatively sensitive to changes in interest rates. Housing is more capital intensive than most businesses, and interest, or more broadly the cost of capital, is an important cost. Unlike major corporations in some industries, the purchaser of housing cannot readily shift increased costs. In the case of housing for owner occupancy, the impact of a change in interest rates is not modified by a reduction in income taxes payable.

There were problems on the supply side of the market, too. Chartered

banks are primarily high-turnover businesses, in both their assets and their liabilities. Business customers maintain current account deposits on which the banks pay no interest, and borrow on a basis in keeping with the generally short-term characteristic of bank liabilities. Current loans customarily are extended on the basis of a line of credit which the bank must take pains to honor, and on condition that the borrower clean up his debt once or more annually. Recently there has been much term lending to business customers. Term loans, however, are commonly written so as to turn over on a five to ten-year basis, with the interest rate subject to interim revision and linked to the prime rate. Business customers also make use of secondary bank services in the form of payroll servicing and foreign exchange facilities. Finally, business customers offer the prospect of a long-term association with the bank and a growing volume of business.

Residential mortgages, on the other hand, are low-turnover investments. Five-year loans are typically amortized on a twenty-five-year basis and written with the expectation that the lender will renew loans in good standing. There is not a close link between mortgage borrowing and the demand for other bank services. The mortgage borrower may well do his banking with another bank. Under these circumstances, residential mortgage lending tends to be a residual form of investment. It expands in times of easy money and contracts during periods of tight money, relative to current loans.

Life insurance companies have become peculiarly subject to tight money in recent years. A high proportion of outstanding policy contracts is subject to policy loan rights on which a maximum interest rate of 6 percent can be charged. As personal loans from other sources become scarce and borrowing costs rise, policy loans become more attractive. Investible funds, including mortgage money, are partly pre-empted by policy contract holders.

Other conditions of mortgage lending also operate to restrict the supply of mortgage funds during periods of tight money. Mortgage interest rates are politically sensitive, and major financial institutions have an economic incentive to maintain a positive social posture. As interest rates rise, the institutions may become hesitant to raise mortgage interest rates sufficiently to maintain their attractiveness relative to other long-term investment outlets. By law, loans to unincorporated borrowers are subject to prepayment after five years, no matter how long the term. Thus, when interest rates are high, and there is a possibility that they will be lower after five years, mortgages lose in attractiveness relative to other long-term debts which have better protection against prepayment. Imposing the higher rate required to maintain the relative attractiveness of the mortgage in the face of this risk is difficult because of the political sensitivity of the rate.

Although less important, the same consideration applies to default risk. If default occurs when interest rates are low, any principal recovered becomes available for reinvestment at a less favorable rate. Thus, even if the loan principal is insured, there is some incentive to prefer investments with low default risk when interest rates are high, unless a premium to cover this risk can be included in the interest rate. In general, mortgages are subject to higher default risk than Federal Government bonds and high-grade bonds of other issuers.

Recent econometric work on the short-term behavior of the residential mortgage market indicates how institutional mortgage flows are affected by tight money.⁹ These studies indicate that "monetary factors have a substantial influence upon the volume of Canadian financial institution mortgage approvals, influencing both the inflow of funds and portfolio investment decisions."¹⁰ Ordered by the combined effects of the two influences, the chartered banks are the most sensitive lending institutions, followed by the trust companies, with the life insurance and loan companies third. Life insurance companies have the least interest-sensitive inflows, and loan companies the least interest-sensitive portfolio decisions, but the mortgage flows of both institutions are "strongly influenced by monetary factors".¹¹

Uncertainty and instability in the supply of residential mortgage funds have pervasive effects upon housing costs through effects upon construction wage rates, material prices, methods of construction, and the costs of land development. Injections of public money into the residential mortgage market can alleviate shortages of funds for house building, but they do not remove the possibility that future shortages might be permitted to develop. Thus, any success realized in reducing the instability of the private supply of mortgage money is conducive to reducing the costs of producing housing over the long run. A more efficient house-building industry, in turn, makes the price of existing housing less than it otherwise would be. Therefore, while the effects of tight money upon privately financed house building highlight the problem of achieving the Government's near-future house-building objective, broadening the private supply of mortgage funds and reducing its instability are, from a housing standpoint, desirable ends in themselves. If these ends are pursued in a way that improves the efficiency of the capital market as a whole, they are desirable not only from a housing standpoint, but from the standpoint of the economy as a whole.

IV. IMPROVING THE PRIVATE SUPPLY OF MORTGAGE FUNDS

To improve the private supply of residential mortgage money, we need to operate in some way upon the regulators of the flow of funds in the capital market. There are three types of regulators: (1) the expected after-tax rewards (profitability), and the risks of the investor; (2) legal constraints of a protective or regulatory kind upon the terms and conditions of financial contracts, upon their primary and secondary marketing, and upon the activities of investors; and (3) monetary and fiscal policies.¹²

There are many possible ways of approaching the problem. Any action that would raise the margin of revenue over cost associated with mortgage

⁹ Lawrence B. Smith, *The Postwar Canadian Housing and Residential Mortgage Markets and the Role of Government* (Toronto: University of Toronto Press, forthcoming); and Lawrence B. Smith and Gordon R. Sparks, "The Interest Sensitivity of Canadian Mortgage Flows", *Canadian Journal of Economics*, August 1970, pp. 407-21.

¹⁰ Smith, *Postwar Canadian Housing*, p. 16.

¹¹ *Ibid.*

¹² The idea of classifying regulators of fund flow in the capital market is given in W. C. Hood, *Financing of Economic Activity in Canada*, a study prepared for the Royal Commission on Canada's Economic Prospects (Ottawa: Queen's Printer, 1958). A different classification is used here.

investment without altering its risk, or the expected after-tax rewards and the risks associated with other forms of investment, would increase the supply of mortgage funds. To illustrate, such an action might take the form of a reduction in mortgage administration costs per dollar of mortgage investment, which does not lead to an increase in risk; or it might take the form of improved diversification in the mortgage portfolio to reduce risk without sacrificing net income. It might take an indirect form. If the liquidity of mortgage investments were increased, the amount of associated investment in low-yielding liquid assets could be reduced, thereby enabling some substitution of mortgages for these and other assets.

Any change in the legal basis of mortgage investment that is attractive to investors would increase the supply of mortgage funds. This assumes, of course, that the change in law does not merely shift some of the burden of mortgage investment from the lender to the borrower. This would just mean a different basis for itemizing costs and receipts associated with the transaction. It also assumes that the change is feasible from a regulatory standpoint. Given these conditions, a change in the law which widened the range of terms and conditions on which the transacting parties could come to a binding agreement could increase the supply of mortgage funds. For example, if the Interest Act were amended to allow borrowers the option of legally postponing their prepayment privilege from the present five years to, say, ten years, the supply of mortgage funds for home ownership might contract less in times of tight money.

An example of a restriction upon mortgage marketing that might be considered for relaxation is the requirement in Ontario that securities salesmen qualify for selling either stocks and bonds or mortgages, but not both. An example of a legal constraint upon the activities of investors is the requirement of trust and loan companies that 20 percent of their demand and term deposits maturing within 100 days be held as cash, bank deposits, and federal or provincial government bonds (see Chapter 4). This places an upper limit upon the proportion of assets invested in other ways. In the absence of such a constraint, some companies might invest a higher proportion of their assets in mortgages, especially when an RMMC exists.

Monetary and fiscal policies can be divided into *general* and *selective* policies. General policies are not intended to affect one type of capital market participant, lender or borrower, more than another. They may have that effect, but that is a shortcoming rather than an intention. Monetary policy applied to chartered bank cash reserves is general in that it is not directed against specific classes of bank borrowers. It is anticipated that the banks' reaction will transmit the impact, ideally, throughout the capital market. In contrast, selective credit controls are applied to specific sectors of the capital market—for example, to consumer credit or to the residential mortgage market. Similarly, one can speak of general fiscal policy which focuses on total tax revenues and total government expenditures and is not intended to favor one type of economic activity over another. Fiscal policy that is general in its intended impact on the capital market would not, by design, discriminate between one type of investment and another, and would also be neutral between consumption and saving. Selective fiscal policy

would discriminate. Obviously the imposition of a tax upon capital gains, taken in isolation, discriminates between common stocks and residential mortgages. The particular mix between the use of would-be general monetary policy and would-be general fiscal policy in combating economic instability is important for the supply of mortgage funds. Changes in general fiscal policy are thought to have less short-term impact upon the supply of mortgage funds.

To further the Government's objective of increasing the role of private funds in housing finance, the Special Project Team on New Financing Mechanisms and Institutions was formed in CMHC. The Project Team was necessarily concerned with all three types of regulators. Unless private mortgage investment was to be increased by legislative fiat, the measures adopted would have to be attractive in terms of profitability and risk. If legislative restraints of a regulatory or would-be protective kind were found to stand in the way of a potentially efficacious measure, the question of whether the constraint should be modified, replaced, or simply removed had to be considered. Because of the impact of monetary policy upon the mortgage and new housing markets, we were naturally interested in the effect that any measures might have upon that impact. It was not within the Project Team's terms of reference, however, to consider changing monetary policy, or changing the mix between the use of monetary and fiscal policies, as a means of improving the private supply of mortgage funds.

Finally, we were necessarily concerned with tax policy, for two reasons. First, the White Paper on tax reform, published in 1969, included proposals to encourage Canadian investment in corporate equities and proposals which would have the effect of discouraging private investment in rental housing.¹³ Second, the tax treatment of mortgage investment funds was believed to be of central importance to their feasibility.

There are many possible ways of influencing the flow of funds in the capital market. In making a selection, it is important to consider their effect upon the efficiency of the capital market. Efficient measures raise economic growth and living standards above the levels that would otherwise prevail; inefficient measures have the opposite effect. In selecting measures for improving part of the capital market, it is necessary to take into account their effect upon the efficiency of the market as a whole. A measure which reduces the efficiency of the capital market as a whole should be rejected, however effective it may be in solving the problem of the part.

Efficiency here has two dimensions—operational and allocational.¹⁴ The former relates to the costs and profits on the services supplied to the capital market by financial institutions and other suppliers (such as lawyers). Efficient measures reduce the costs of supplying the services, or move the level of profit on them closer to the optimum. The optimum level of profit is the level that is sufficient, but not more than sufficient in the long run, to

¹³ E. J. Benson, Minister of Finance, *Proposals for Tax Reform* (Ottawa: Queen's Printer, 1969).

¹⁴ James S. Duesenberry, "Criteria for Judging the Performance of Capital Markets", in H. K. Wu and A. J. Zakon, eds., *Elements of Investments: Selected Readings* (New York: Holt, Rinehart and Winston, 1965), pp. 1-9.

attract enough resources to expand the supply of services to meet increases in demand. In the short run, the level of profits in an efficient market may exceed this level in the case of suppliers who respond quickly to changes in market conditions, and in the case of successful innovators. It is important for long-term improvement in the efficiency of the capital market that would-be innovators not be precluded from earning above-average profits in the short run. This requirement is no different from that of other industries. The fact that innovators in the provision of capital market services do not enjoy patent protection for their innovations tends to make the short run shorter than for innovators of patentable products.

Allocational efficiency refers to the ability of the capital market to allocate the limited supply of savings to those users whose projects have the highest expected total returns, after due allowance for risks and the costs of transferring funds. Conceptually, "returns" include benefits which are not normally quantified but which are nonetheless real, as in the case of the return on investment in owner-occupied housing. "Total returns" include both the return to the investors (both equity and creditor) and the benefits which accrue to others in the case of certain investments. For example, if the operations of an RMMC have the effect of reducing residential mortgage market interest rates, benefits accrue to borrowers in the form of reduced costs of financing housing. External benefits are noteworthy because they can be sufficient to warrant subsidizing an investment proposal for which the internal returns are too low to attract investors.

The foregoing view of efficiency served as a guideline for the work of the Project Team.

V. FACTORS RELATING TO THE SELECTION OF THE THREE PROJECTS

The Project Team was asked to examine in particular a residential mortgage market corporation, mortgage investment companies, and variable terms mortgages. Many factors were considered in selecting these projects. These were enumerated originally by M. J. C. Boyd, Project Team Leader, as part of an internal memorandum, following discussions with members of the Project Team and with officials from the private and public sectors. They are reproduced here with only minor editing.

1. The position of the chartered banks, the pre-eminence of their branch system in Canada, the formation of such subsidiaries as Kinross, Roy-more, Tordom, their asset/liability structure, the low percentage of mortgage assets in their portfolios, their traditional lending practices on commercial loans, their role in lending to developers during construction
2. The role of trust and loan companies as mortgage lenders, their position in the institutional mosaic, their liquidity needs, their role as mortgage bankers, their role as portfolio advisers, the fairly disparate nature of asset and liability structure from one company to another
3. The position of pension funds as collectors of long-term impounded savings, their tax status, their expected growth, their sources of portfolio

advice, the differing and complicated structure of the control over pension fund investments, the trend of long-term savers toward income property loans rather than single-family loans, the low percentage of their assets in mortgages, the differences in this percentage between large and small pension funds

4. The historic position occupied by the life insurance companies in mortgage lending, the development over many years of a well-established and experienced mortgage originating operation, the trend in recent years toward investment in income property loans and toward direct ownership of income properties, the effect of policy loans on their liquidity during tight money periods, the effect of taxation on their future growth, their excess mortgage expertise and how it can be harnessed
5. The absence in Canada of such thrift institutions as building societies, mutual savings banks, and savings and loan associations
6. The development in the past few years of independent mortgage banking companies in Canada, the requirements of such companies in the light of their relatively small capital
7. The development by the Royal Trust Company of the M Fund and its apparent acceptability to individual investors
8. The arrival on the scene in the past five years of large, publicly owned and traded real estate development companies such as Markborough, Cadillac, Trizec, Bramalea, and Campeau
9. The isolated nature of the primary mortgage market in Canada and the rudimentary form of the secondary mortgage market
10. The interest shown in the first part of the last decade by members of the Investment Dealers' Association in mortgage trading during the period when CMHC was auctioning blocks of mortgages to approved lenders and IDA members, the important position of the investment dealers in their bond trading activities as principals, their isolation in the past few years from the mortgage market, how to harness their expertise
11. The restrictions imposed by provincial securities commissions on the investment by mutual funds in illiquid assets
12. The increasing concern over the past five or six years by institutions and institutional investors in liquidity
13. The structure of the United States mortgage industry, the activities of an independent mortgage banking industry in the United States, the interface of mortgage bankers with commercial banks, the government or quasi-government back-up structure to the mortgage banking industry
14. The history and development of real estate investment trusts in the United States, and the property bond experiments in the United Kingdom
15. The development of the Government National Mortgage Association (GNMA) and the market for mortgage-backed securities in the United States
16. The increasing activities in the United States of investment bankers in mortgage and real estate matters brought about by the growing awareness of real estate investment trusts and GNMA securities, the purchase

by a number of leading investment bankers of mortgage broking or mortgage and real estate matters brought about by the growing aware- and mortgage markets

17. The widespread use of variable terms mortgages in the United Kingdom and the growing debate in the United States

In addition to the above list (which is not intended to be comprehensive), the following considerations appeared important:

1. In examining the future growth of pension funds as an increasingly important factor, an assessment has to be made of the method by which they will be provided with mortgage advice and mortgage banking services. It appears that the pension funds will require the development of mortgage banking services capable of originating and servicing mortgages in any major urban center in Canada.

The nature of pension fund mortgage investment in relatively large income property loans requires a high degree of mortgage expertise. The Canadian life insurance companies and trust companies developed a branch system enabling them to place mortgage lending personnel in all important areas. Similar arrangements are not open to the individual pension funds. A correspondent/mortgage banker/investment dealer relationship similar to the United States structure may have a role to play in Canada in respect to individual pension funds, supplementing the activities of some trust companies in this area.

2. Subsequent to the Second Conference on Mortgage Investment for Trusteed Pension Plans convened by the Honourable Robert Andras, Federal Minister Responsible for Housing, in December 1970, it was possible to assess the views of pension fund investors. The principal concerns (by no means unanimous) of such investors appear to be

- a) the lack of liquidity in the mortgage market
- b) the unavailability of a suitable packaging device such as conduits
- c) the long lead time from commitment to funding

It was also suggested that one of the difficult problems was to reach the right decision-making personnel or strata of management in attempting to promote pension fund investment in residential mortgage loans.

3. Actions that would aid only one segment of the market at the cost of hurting another segment should be avoided. For example, to urge the banks to borrow in the mid-term market, thus providing them with more suitable liabilities against five-year renewable mortgages, will not help if it hurts the trust companies.

4. Recognition must be given to the needs of the home owner as borrower. One of the obvious factors is that, under the present and the proposed tax structures, the home owner may not deduct mortgage interest payments for tax purposes. Thus, to the extent that imperfections in the mortgage market are reflected in higher yields, the borrower's position is more serious, particularly as the mortgage loan can be considered the largest long-term debt liability a family is likely to incur. In addition, this factor tends to increase the variability of demand for home mortgages and contributes to instability in the mortgage market. Similarly, the

ability of the home owner to voice concern in influential circles is greatly restricted vis-à-vis the businessman.

From an overall consideration of the various factors, it seemed desirable that any proposed action should attempt to facilitate

1. Greater residential mortgage lending activity by the chartered banks
2. Greater residential mortgage investment by the pension funds
3. Involvement by individuals and small institutions in the residential real estate and mortgage markets
4. Greater use of existing available expertise in both mortgage originating and trading

Thus, it appeared necessary to concentrate on financial devices designed to improve the efficiency with which the mortgage market

1. Provides liquidity and an effective response to changes in supply and demand
2. Links different market segments and utilizes available expertise
3. Offers small institutions and individual investors access to expertise, diversification, and participation in large mortgages and real estate projects
4. Uses a mortgage instrument flexible enough to meet the reasonable requirements of different types of borrowers and lenders

The principal requirements to ensure the development of the mortgage market in an effective manner and to enhance the long-term input from the private sector were considered to be

1. The creation of a more fully integrated residential mortgage market structure, with a strong center or focal point assisting in the establishment of an effective secondary mortgage market
2. A greater interface between such market segments as institutional lenders, investment dealers, mortgage bankers, investment counselors, and private mortgage insurers
3. An interaction between the mortgage, bond, and stock markets through the provision of mechanisms which would permit investment dealers to distribute to the public shares in mortgage-based intermediary vehicles and to trade actively in mortgage-backed securities

The possibility of developing a more integrated market structure and of providing for improvements in liquidity, flexibility, stability, and efficiency in the utilization of existing expertise resulted in a decision to concentrate on the Residential Mortgage Market Corporation, mortgage investment companies, and variable terms mortgages as providing the fastest results.

THE RESIDENTIAL MORTGAGE MARKET CORPORATION (RMMC) would ease the restrictive effects upon the supply of residential mortgage funds caused by the low marketability of the mortgage instrument. The RMMC would operate as a secondary market maker. To do so, it would maintain a portfolio of residential mortgages ready for sale, and a liquid position (cash, other liquid assets, unutilized borrowing capacity) to enable it to increase its portfolio readily should the need arise. This would enable mortgage investors to achieve their target portfolios more readily when their holdings were below or above target levels. This would enable existing

mortgage investors to hold relatively more assets in this form. It would also encourage new investors to enter the field. At the same time, the RMMC would remove some of the needs of lenders to sell their residential mortgages, or adjust their lending activity, for liquidity reasons. It would do this by making available to lenders collateral loans secured by a pledge of residential mortgage holdings.

An RMMC might also help to reduce the sensitivity of the supply of residential mortgage funds to changes in monetary policy. An RMMC might exert such an influence in one or two ways. First, it would do so if it increased the role of investors in the market who would participate with above-average stability. Second, it would do so if it could effectively supplement or enlarge the supply of residential mortgage funds during periods of tight money and reduce it during times of easy money. If the RMMC were profit motivated, it would be required to speculate judiciously on interest rate movements.

MORTGAGE INVESTMENT COMPANIES (MICs) would provide a type of intermediary for the mortgage and real estate markets analogous to the closed and open-end investment companies which operate primarily in the stock market. It is easy for small institutional and individual investors to own (indirectly) a portion of a well-diversified, professionally managed portfolio of securities because sizing, marketing, management, marketability, legal, regulatory, and taxation problems are recognized by the device of the investment fund. By contrast, such investors typically face these problems if they wish to invest in residential mortgages and real estate equities on a comparable basis. It is legally and administratively cumbersome to split mortgages and real estate equities in such a way that investors become owners of separate divided interests. The small investor needs some form of intermediary to split single large investments effectively, or to acquire a diversified portfolio of fractional interests in such investments. This is the basic reasoning on which MICs are predicated.

MICs would make a noteworthy contribution to housing finance, and to the improvement of the capital market, if they provided a useful service not otherwise readily available to important classes of investors. Thus, their differences from three other types of intermediaries should be noted. They would differ from traditional investment companies in assets in that they would hold mortgages and real properties. The predominant form of the traditional investment company is the open-end mutual fund. Reflecting the low marketability of their assets, the predominant form of MIC is likely to be the closed-end company, with shares listed on stock exchanges for marketability.¹⁵ Also, the mutual fund is normally unlevered whereas levered MICs will probably be the predominant form.

The MIC's nearest substitute is the loan company,¹⁶ but MICs would

¹⁵ Conceivably this condition could change in due course, if an RMMC were successful in developing the secondary market in residential mortgages, and if the MIC held few other assets of low marketability.

¹⁶ In fact, Bill C-135 proposed that MICs be treated as a form of loan company and regulated under the Loan Companies Act. Canada, House of Commons, Bill C-135, *The Residential Mortgage Financing Act*, First Reading, February 1, 1973.

differ from loan companies in important ways. They would be allowed to hold a higher proportion of real estate in their investment portfolios, and would be restricted to lower levels of leverage. Most important, they could qualify for conduit status for income taxation. If they met prescribed requirements, including the payout of a high proportion of net income, their earnings would not be subject to income tax at the corporate level. The payout would accrue tax at the applicable rates of the recipients. In exchange for such tax treatment, MICs would be precluded from engaging in "active" business, even any speculative trading of their assets. They are intended to be "passive" vehicles for holding mortgage and real estate investments.

Finally, MICs would differ from real estate development companies in their high mortgage orientation, "passivity", and high payout characteristics.

MICs would be like the RMMC in that they could have the effect of bringing investment dealers actively into the residential mortgage market. The RMMC would enable them to offer residential mortgages to their investor clients, along with stocks and bonds. The MICs would provide familiar forms of securities to offer their investor clients and also would provide underwriting opportunities. The active and widespread involvement of the investment dealing industry in the mortgage market would be a significant step in the development of that market, and in the development of the capital market as a whole. As with the RMMC, MICs might help to reduce the sensitivity of the supply of residential mortgage funds to changes in monetary policy. They would do this if they succeeded in bringing investors into the market who have above-average stability in their mortgage investment behavior. They would also have a stabilizing effect if their activities offset changes in market participation by other investors.

In searching Canada's financial system for means of broadening the supply of residential mortgage funds, one is certain to observe the large flow of money savings that occurs in the form of increases in deposits in the chartered banks and other deposit-taking institutions. As is evident in *Table 1-1*, the chartered banks stand "head, shoulders, and torso" in size above the other financial intermediaries. While chartered banks and other depositories participate in the residential mortgage market, it is fair to say that a relatively low proportion of mortgage lending is financed by these low-cost short-term deposits. It is well recognized, of course, that financial intermediaries must be concerned about the degree of mismatching between the term structures of their assets and their liabilities. Mortgages, even the five-year kind, complicate the matching problem for short-term depositors.

This condition raises three questions. Can a form of residential mortgage be devised which would ease the matching problem for depositories? Would the mortgage be sufficiently attractive to induce depositories to invest more of their short-term deposits in residential mortgages? At the same time, would it be attractive to borrowers? The importance of these questions led the Project Team to examine variable terms mortgages as a possible addition to Canada's residential mortgage market mechanisms.

A VARIABLE TERMS MORTGAGE (VTM) is a mortgage wherein provision is made for the variation of specified terms of the contract on a predetermined

basis during the lifetime of the loan. The important terms that may be varied are the rate of interest, amortization period, and the amount of the installment payments. Some lenders may be able to accommodate a variable balance feature as well, which would not penalize prepayments and would permit further borrowing as part of the lending arrangement. The term of the loan would remain fixed.

As proposed by the Project Team, the interest rate in a VTM would be linked to a well-established capital market rate, such as the average rate for long-term Canada bonds as published by the Bank of Canada. The lender would be free to set the initial spread over the anchor rate, which would be maintained (approximately) by annual or possibly semi-annual updating over the term of the loan. To the extent that movements in its deposit rates correlated with movements in the anchor rate, the lender's spread would be stabilized. Variations in the interest rate on the loan, within certain limits, would not preclude stable monthly payments if provision were made for appropriate variation of the amortization period. Alternatively, provision could be made to vary the amortization period from year to year independently of the interest rate. The borrower then could use the VTM as a flexible savings device. A variable balance feature would further facilitate the borrower's saving-investment process.

For the chartered banks, the VTM would be less unlike commercial loans than are fixed terms mortgages. How effective VTMs might be in competing for the investible funds of the banks would depend upon the importance of the remaining differences, especially in their profitability. The profitability of the VTM depends to a great extent on how attractive its non-interest features are to borrowers.

These were the three proposals for improving the private supply of mortgage funds which were examined by the Project Team. They do not, of course, exhaust the list of possibilities. One could argue, perhaps, that they are not the three best measures to examine. On the other hand, the task of improving the residential mortgage market, like the task of improving the capital market as a whole, should be treated as continuous. In that context, ranking the possibilities is important, but so is getting on with the job.

Once the three proposals were selected for examination, a study team was formed to explore each one. The teams were structured to include, in each case, at least one economist, lawyer, and financial practitioner, and to have private market, government, and academic viewpoints all represented. From the beginning of the work, a special effort was made to elicit the views of appropriate practitioners. For the RMMC project, an extensive interview survey of major lending institutions and investment dealers was conducted, and a mail questionnaire survey of trustee pension funds was undertaken. For VTMs, two small interview surveys were conducted: one of selected banks and trust companies; the other of house builders. Some interviews also were conducted as part of the MIC project. In the MIC project, there was extensive study of United States experience, but the lessons of foreign experience were sought in the other two projects as well.

Once the projects were considered to be sufficiently advanced, an Inter-departmental Committee was formed to examine them. The Project Team

was represented on the Committee and worked with it in developing the latter's report to the Government. The Project Team was dissolved upon submission of the Interdepartmental Committee's report.

VI. CONTENTS OF VOLUME I

This study is divided into seven chapters and seven appendices. In Chapter 2, Professor H. H. Binhammer briefly outlines the nature of the residential mortgage market, and the need for, and consequences that would follow from, a more highly developed secondary market. In Chapter 3, Professor Binhammer presents a general description of the organization and operations of a proposed RMMC. Briefly, the proposal is to form a private, market-oriented Crown corporation, separate from CMHC, which has the power to trade in residential mortgages and make collateral loans against their security (but without power to originate mortgage loans), and which will seek to earn an economically justifiable rate of return. The description draws upon the findings of the Project Team's interview survey of financial institutions about a proposed RMMC, and reflects discussions on the subject by members of the study group established by the Project Team.

In Chapter 4, E. D. L. Miller, G. A. Golden, and J. A. Galbraith discuss the potential impact the RMMC might have upon major lending institutions. Each of the authors writes about the type of financial institution in which he is an officer. Thus, Miller describes the impact an RMMC might be expected to have upon the trust and loan companies; Golden, the impact upon the life insurance companies; and Galbraith, the impact upon chartered banks. Each writer discusses the significance of both the trading and the lending facilities of the RMMC.

In Chapter 5, Professor W. R. Waters examines the potential residential mortgage investment of trustee pension funds. The findings of the Project Team's survey on the subject are discussed, and an estimate is provided of the prospective levels of net mortgage investment by these institutions, taking into account the effect of an RMMC.

Chapter 6, by Professor Paul Halpern, is an economic analysis of the RMMC. It deals with the Corporation's trading function, considering whether that function could be administered on a profit-making basis to reduce the instability of flows in the primary residential mortgage market. The analysis is entirely in theoretical terms. The conclusion is that the RMMC must choose between being a secondary market maker or a yield moderator. It cannot be both.

The last chapter in this study is a postscript by the present writer. It consists mainly of a description of and comments on the FMEC (Federal Mortgage Exchange Corporation) specified in Bill C-135.

Chapter 2

The Mortgage Market: The Nature of the Problem

by *H. H. Binhammer*

I. THE MORTGAGE INSTRUMENT

A residential real estate loan is, in almost every case, accompanied by a mortgage. A mortgage is the creation of an interest in property as security for the payment of a debt or for the fulfillment of an obligation.

Indigenous to English law under the Old Registry System, the lender (mortgagee) obtains actual ownership to mortgaged property, but subject to the borrower's right to redeem. Under the Land Title's System, traditionally used in the Province of Quebec, the borrower retains legal title and gives the lender only an interest in his property.¹ In other words, the debtor gives a pledge to the creditor as security. This is known as hypothecation, and the document or instrument acknowledging such a transaction, as a hypothec. The National Housing Act (1954) defines a mortgage as including "hypothec and an assignment of or a mortgage on the leasehold interest of a lessee".²

The typical mortgage instrument used in home loan financing includes the date, names of the borrower and lender, the exact legal description of the property, a statement of the principal money advanced, and a promise to repay the principal money at a specified rate of interest according to an agreed schedule. The instrument may also contain provisions for prepayments and the adjustment of interest. In addition, it may include promises or "covenants" to pay all taxes, special assessments, and other charges levied by the local government upon the property; to keep the property in good repair; and to keep the property fully insured against fire and other risks and hazards. It also may covenant that the property will not be used for any unlawful purpose and that no substantial changes, alterations, or additions will be made to the property without the creditor's permission.

Before a supplier of mortgage funds lends money with a particular parcel of real property as security, he will want to know the status of the title to the property and to have an appraisal of the market value of the property carried out. In some cases, the lender may wish an insurance company to

¹ H. Woodard, *Canadian Mortgages* (Don Mills, Ont.: Collins, 1959).

² Canada, Statutes, 1953-4, *The National Housing Act*, 1954, c. 23, s. 2 (27).

issue a title policy for his protection, though this procedure is relatively uncommon in Canada.

There are now two basic types of residential mortgages: National Housing Act (NHA) mortgage loans, and conventional mortgage loans. The distinctive feature of the NHA mortgage loan is that the lender is insured against default by the borrower.³ The insurance policy is issued by Central Mortgage and Housing Corporation (CMHC) on behalf of the Government of Canada. Although a private insurance company has been established to issue insurance policies on conventional mortgage loans, a relatively small proportion of outstanding conventional mortgages is insured.

As CMHC issues an insurance policy only if a property meets specified standards, NHA mortgage loans display more homogeneity than conventional loans. Since no two properties are identical and since there are differences in the quality of property appraisal, however, it follows that no two mortgage loans are the same. Although we are moving toward a standardized mortgage document throughout the country, the move toward a standardized mortgage loan remains endemic.

Residential mortgage loans are by no means unclassified. Properties have common characteristics such as location, type and age of building, and quality of construction. CMHC has brought to the residential mortgage market a significant degree of standardization by the introduction of better inspection and appraisal procedures, minimum standards of construction quality, and standardization of mortgage terms. On the other hand, some of CMHC's administrative regulations may have complicated the task of NHA mortgage lending and may have tended to inhibit borrowers from such mortgages, thereby accentuating differentiation among mortgages.

II. THE RESIDENTIAL MORTGAGE MARKET

The residential mortgage market consists of a *primary* and a *secondary* market. The primary market is that part of the market in which mortgage loans are originated, and the secondary market is that part of the market in which existing mortgages are bought and sold. In other words, the primary market involves an extension of credit and the secondary market, a sale of the credit instrument.

The principal originators of residential mortgage loans in Canada are the major private lending institutions—the life insurance companies, the loan and trust companies, and the chartered banks. Individuals, mutual benefit and fraternal societies, Quebec savings banks, as well as CMHC, also are

³ For each NHA mortgage, the insurance policy allows for a cash payment to policy holders in an amount representing the sum of four items:

- a) 100 per cent of the amount of mortgage principal outstanding
- b) the mortgage rate of interest for a period of default up to twelve months
- c) the mortgage rate of interest less 2 for a further period of up to six months (for example, if the mortgage rate of interest were 9½ percent, the relevant rate for this period would be 7½ percent)
- d) an acquisition fee of \$250 or the legal cost of acquisition, taxed on a party and party basis, whichever is the greater

See Central Mortgage and Housing Corporation, *Insured Mortgages as Investments* (Ottawa: CMHC, 1970).

important originators of residential mortgages. The private lending institutions engaged in originating residential mortgages have developed specialized mortgage departments skilled in credit selection, appraisal, construction inspection, and the administrative work involved in servicing mortgage portfolios. Many of these institutions, in fact, have developed a capacity to originate and to service mortgage loans in far greater volume than their capacity to hold them in their own investment portfolios.

Mortgage brokers usually originate residential mortgage loans indirectly by "finding" borrowers for financial institutions who pay them a "finder's fee". In recent years, developers have employed the services of mortgage brokers. Where this is the case, the developer pays the mortgage broker the fee, or shares with the institutional or other lender. In Ontario, mortgage brokers operate under the Ontario Mortgage Brokers Act.

A small number of specialized mortgage brokers originate mortgages to sell. They are in continuous contact with lenders who do not have mortgage departments to originate mortgages. The major clients of these mortgage brokers have been the small pension funds.

The introduction of NHA-insured mortgages in 1954 can be regarded as the first step in developing a secondary mortgage market in Canada. The National Housing Act (1954) provided for the marketing of insured mortgages. Approved lenders originating NHA loans were permitted to sell them to other investors, provided that the servicing of the mortgages was retained by the approved lender. This made it possible for institutions, as well as individuals, to invest in mortgages even if they were unable either to originate or to administer them. CMHC was also given authority to buy and sell insured mortgage loans.⁴

The annual charge by approved lenders for servicing mortgages has generally been less than one-half of one percent of the mortgage balance outstanding. In 1970, many approved lenders were charging three-eighths of one percent for servicing single residential mortgages and from one-quarter to one-tenth of one percent for multi-dwelling mortgages, depending on the size of the mortgage. In some cases, mortgages have been sold on a prepaid servicing basis; the price of the mortgage includes the total servicing costs over the life of the mortgage. Some investors prefer to prepay all the servicing costs, because in this way the price paid for the mortgage corresponds directly to the net yield for which the mortgage is purchased.

CMHC has made no active attempt to purchase loans from approved lenders. It has probably chosen not to do so because it has not received a policy directive from the Government to the effect that such a course is desirable.

On April 13, 1961, the Government directed CMHC to sell a sufficient portion of its portfolio of saleable mortgages to promote the establishment of an active secondary market. At that time, in a statement in the House of

⁴ CMHC has authority to buy and sell insured mortgage loans, make collateral loans to mortgage lenders on the security of mortgage loans, and purchase the debentures of lending institutions. See Canada, Revised Statutes, 1952, *The Central Mortgage and Housing Corporation Act*, c. 46, s. 28; and Revised Statutes, 1971, *The National Housing Act*, c. N-10, s. 10.

Commons, the Minister of Public Works said that "the first step necessary to encourage an active market is to ensure that there is an ample supply of existing mortgages to interested buyers. Accordingly, the Government has instructed CMHC to offer for sale as soon as possible, at reasonably attractive yields to investors, mortgages now held in its portfolio as a result of the extensive direct lending operations it has undertaken since this Government took office in 1957."⁵

From 1954 to 1961, a secondary market for NHA mortgages had slowly begun to develop. During these years, \$266 million of mortgages were sold by approved lenders out of \$3.1 billion of mortgages which they had originated under the National Housing Act.⁶ This meant that one out of ten mortgages originated by approved lenders under the NHA had been sold in the secondary market and that, in a sense, mortgage lenders on an average obtained 9 percent of the funds they invested in NHA mortgages through the secondary mortgage market.

Between 1961 and 1965, CMHC held thirteen auctions at which over \$300 million of NHA mortgages were sold into the market. (See Appendix A, *tables A-22 and A-23.*) A large proportion of these mortgages found their way into the portfolios of pension funds and other investors who otherwise would not have invested in mortgages. After the twelfth auction, CMHC restricted eligibility for tendering to NHA-approved lenders, NHA-approved correspondents, and members of the Investment Dealers' Association of Canada who agreed either to offer the mortgages for resale or to use them as collateral for securities fully backed by NHA mortgages.

As an added stimulus to the development of an active secondary mortgage market, CMHC was authorized in December 1962 to act as the lender of last resort to any holder of NHA mortgages who found himself temporarily in a non-liquid position. An overall ceiling of \$100 million was established for loans of this type. These lending facilities have been used only once, and for purposes which would probably now be handled more appropriately by the Canada Deposit Insurance Corporation. When the Government announced the new lending facility of CMHC in 1962, it believed that the mere existence of emergency lending facilities might provide mortgage lenders with greater access to credit from banks and other sources.

Between 1954 and 1971, total sales and purchases of insured NHA mortgages in the secondary market amounted to \$1.3 billion. Of this amount, CMHC sold \$329 million and purchased \$3.1 million. Among the private lenders, the trust companies sold \$580 million; the chartered banks, \$277 million; the life insurance companies, \$61 million; and loan and other companies, \$53 million. Life insurance companies purchased \$338 million; pension funds, \$332 million; chartered banks, \$231 million; non-financial firms and institutions, \$213 million; trust companies, \$135 million; and loan and other companies, \$45 million. (See Appendix A.)

⁵ Canada, *House of Commons Debates*, Fourth Session, 24th Parliament, 1960-61, Vol. IV, p. 3703.

⁶ Central Mortgage and Housing Corporation, *Annual Report, 1961* (Ottawa: CMHC, 1962), p. 10.

III. THE FUNCTIONS OF FINANCIAL MARKETS

The residential mortgage market, like financial markets generally, has three major functions to perform: facilitating the transfer of funds from surplus spending units; providing a financial infrastructure which allows an efficient allocation of resources; and providing for the liquidity of non-monetary assets.

The direct flow of funds between savers and borrowers is hindered by risk, and the inconvenience and cost of transfer, as well as by the desire on the part of savers (lenders) to avoid illiquidity. Although some funds in financial markets move directly between savers and ultimate lenders, most of them are subject to intermediation. Indeed, developed financial markets are characterized by a high degree of financial intermediation. In this way, funds flow more readily between savers and borrowers even if they have diverse preferences as to terms and conditions. As financial intermediaries tailor their liabilities to meet the preference of savers, saving is probably higher than it would be in the absence of intermediation. Moreover, as intermediaries have developed special skills in investing funds, the allocation of real savings among alternative investments is more efficient. In other words, with developed financial markets where there is a high degree of intermediation, consumers and lenders are able to achieve something closer to an optimum consumption pattern with respect to time, and there is an efficient ordering of investments reflected in an efficient allocation of scarce resources. Furthermore, developed financial markets make it easier for the allocation of resources to respond more readily to the priorities established by government.

An important function of developed financial markets is to provide liquidity for financial assets. The service of liquidity is desired by financial asset holders, even if they do not in fact dispose of their financial assets. The desire for liquidity by financial investors in turn affects the costs of financing real investment for those who use the capital market to finance such investment. Given the demand for housing, lower mortgage rates raise the net return on equity investment, which attracts funds for this purpose, thereby eventually lowering the cost of equity financing as well.

IV. CHARACTERISTICS OF A DEVELOPED SECONDARY MORTGAGE MARKET

In a developed secondary mortgage market, one would expect to find the following conditions:

1. A sufficiently large number of participants so that it is impossible for any one to have an undue influence on the terms of mortgages originating in the primary market or the going price of existing mortgages trading in secondary markets.
2. A mortgage instrument that is standardized so that it is not identified with a particular lender in a manner that enables him to influence price or terms. Although individual mortgages are differentiated, there is much scope for processing them into relatively homogeneous packages to meet the requirements of a developed market.

3. Market participants who have adequate knowledge of market conditions to make rational choices based on the prices generated in the market.
4. Continuous trading in the market, or at least the possibility for mortgage lenders to turn to the market whenever they desire to adjust their mortgage portfolios. This implies that there is a sufficiently large variety of "packaged mortgages" to meet the diverse preferences of lenders.
5. Relatively close integration of the various sub-markets, and a total residential mortgage market related closely to other financial markets. The mortgage market would also show some homogeneity geographically.

A secondary market displaying the above conditions has not developed in Canada because the private mortgage lenders have had little incentive to take the initiative, they have lacked the capital resources required by market makers, or they have been reluctant to undertake the inherent risks. Until recently, private mortgage lenders have had little incentive to develop a secondary market because they were able to absorb mortgages into their portfolios at a rate faster than the growth of their ability to originate them. It is only within the last few years that many of the lenders have taken a more sophisticated approach in managing their portfolios. As this has involved them in making more frequent adjustments to their portfolios, the desirability of a more developed secondary market for residential mortgage loans has become more attractive.

V. THE ROLE OF MARKET MAKERS

In order for a secondary mortgage market with adequate breadth and depth to develop in Canada, it is necessary to have market makers. Without a market maker, the secondary mortgage market will remain purely transitory, changing erratically in breadth and incapable of producing confidence in the marketability of residential mortgages. One of the more important reasons for recommending the establishment of an RMMC is its capacity to provide the essential services of a market maker.

Jones and Grebler have suggested two essential services that must be provided by a market maker.⁷ He must provide a mechanism for making adjustments in mortgage holdings, and he must provide a facility for processing mortgages—for acquiring, classifying, packaging, holding, transporting, and servicing them.

Various factors may influence a portfolio lender to adjust his mortgage holdings in a secondary market. These include (1) changes in liquidity preferences; (2) changes in yield on various types of alternative investments; and (3) unanticipated differences between net inflow of funds and investment commitments and opportunities.

Because of inevitable uncertainties in estimating the flow of funds available for investment, and the timing and volume of loan disbursements resulting from earlier commitments, primary mortgage lenders expose themselves to risk of over-committed positions. This has resulted in lenders either reducing or refraining from originating loans, thereby creating wide fluctua-

⁷ Oliver Jones and Leo Grebler, *The Secondary Mortgage Market* (Real Estate Research Program, University of California, Los Angeles, 1961), p. 23.

tions in the availability of mortgage funds. A developed secondary market would allow lenders to digest over-committed positions without at the same time requiring wide fluctuations in primary markets. Greater stability in the residential mortgage market would attract under-committed and other investors into the market. This would ease the supply of mortgage funds and moderate any upward movement in mortgage yields. Jones and Grebler observe that

“it is futile to presume that the secondary market, perfect or imperfect, or that any other device can be expected to maintain perfect stability in mortgage rates and in new construction during periods of correction for a cumulative error in judgement on the part of primary lenders.”

However,

“by purchasing mortgages from over-committed lenders and by bringing about an adjustment in the price of mortgages, the perfect secondary market would tide the mortgage market over the period of digestion without seriously disrupting the flow of mortgage funds.”⁸

When savings increase faster than anticipated, lenders may find themselves in under-committed positions. A developed secondary market would make it easier for them to adjust their positions without creating unwanted fluctuations in the flow of mortgage funds.

Aside from situations of cumulative over-committed or under-committed positions, individual lenders will resort to a secondary market to meet their normal requirements of portfolio adjustment. At any given time,

“one lender may consider his portfolio too heavy; another too light. Still another may wish to extend mortgage credit to retain good customers, even though he considers his mortgage portfolio already too heavy.”⁹

Because of their traditional portfolio and management practices, and for other reasons, lenders have different portfolio preferences. A developed secondary mortgage market would allow them to satisfy their preferences more adequately and more efficiently.

A market maker may view his role in creating a mechanism for the ready purchase and sale of existing mortgages in one of two ways. He may either maintain stability in the flow of mortgage funds and allow prices to find equilibrium levels, or support prices and allow mortgage flows to find equilibrium levels. Because one of the important reasons for developing a secondary mortgage market is to provide stability in the flow of mortgage funds, the mortgage maker should consider changes in mortgage flows as his main indicator for intervention in the mortgage market. This approach, if adequately made known, will relieve the mortgage maker of any responsibility for maintaining market prices, as this would always be subject to public criticism. Even so, the market maker must continuously attempt to educate the public as to his role.

A market maker must make it quite clear that mortgage yields are nothing

⁸ *Ibid.*, p. 17.

⁹ *Ibid.*, p. 18.

more than relative prices which must be allowed to fluctuate if there is to be an efficient allocation of resources.

We have already observed that portfolio lenders have different preferences and that mortgage loans display a high degree of differentiation. Despite the wide range of differentiating characteristics, a degree of standardization, which is required in a developed market, can be attained by classifying residential mortgages according to quality that can be evaluated readily by market participants. The failure of a secondary mortgage market to develop in Canada can be traced, in large part, to the lack of a market maker who packages mortgages on a continuous basis. Also, there has not been any effective attempt to establish some sort of standard system that would reduce the impact of commodity differentiation on the size and scope of the secondary market.

Finally, the market maker must provide a central marketplace in close communication with, if not proximity to, the major market participants. Information on the state of the mortgage market and on financial markets generally should flow continuously in and out of the central marketplace.

VI. CONSEQUENCES OF A DEVELOPED SECONDARY MARKET

1. The improved marketability of residential mortgages resulting from the existence of an adequate secondary market will encourage traditional lenders to invest a larger proportion of their funds in residential mortgages.

"Because the mortgage position of lenders would be less likely to become frozen and their ability to invest a part of the future inflow of savings in mortgages would become more certain, the volume of highly liquid, non-mortgage assets held for portfolio adjustment purposes would be reduced in favor of higher-yielding mortgages."¹⁰

2. New participants can be expected to be attracted to the residential mortgage market if mortgage instruments become more marketable and therefore more liquid.
3. As more funds for housing would be available from private lenders, the Federal Government would be able to concentrate its limited resources more effectively on meeting the growing needs of that sector of the housing market which requires some form of subsidy.
4. A secondary mortgage market would reduce instability in the flow of mortgage funds and the volume of new construction. Mortgage lenders would not have to change their participation in the primary mortgage market in order to adjust their portfolios.
5. The housing sector would not have to absorb as large a share of restrictive monetary policy. A developed secondary market would be more closely integrated with financial markets generally, and mortgage yields would move more closely with yields on alternative investments. This would result in more stability in the flow of mortgage funds.

¹⁰ *Ibid.*, p. 24.

6. As a secondary mortgage market would remove some of the disproportionate impact of monetary policy on the housing sector, the use of monetary policy would be freed from one of its major criticisms.¹¹
7. A fully developed secondary market would tend to reduce the cost of borrowing on the security of residential mortgages. Lower costs would be the result of a more efficient processing mechanism and of an increase in the volume of funds seeking mortgage investment.

¹¹ Some of the implications of this have been explored in H. H. Binhammer, *The Activities of a Central Mortgage Bank and Government Stabilization Policies*, unpublished background paper prepared for the Special Project Team on New Financing Mechanisms and Institutions, 1971.

Chapter 3

Organization and Operations of a Proposed Residential Mortgage Market Corporation — A General Description

by H. H. Binhammer

I. ORGANIZATIONAL FORM

The instrumentalities considered by the Project Team for the conduct of central mortgage market-making functions were

1. A separate Crown corporation reporting to the Minister responsible for housing
2. A subsidiary company of Central Mortgage and Housing Corporation
3. A division of Central Mortgage and Housing Corporation

As indicated in the Project Team's survey (see Appendix B) and in other discussions, the financial community expressed a general preference for the proposed RMMC to be government owned and controlled, at least during the formative stage. The only strong dissenter was one of the larger life insurance companies, which believed that the Corporation should be established by private enterprise. Some observers feel that over a period of years it could, and should, be turned over to the private sector.

Conducting central mortgage market-making functions within the existing or a new framework of CMHC has certain advantages. It prevents the proliferation of government agencies. CMHC already has a staff with expertise in the mortgage market and a close relationship with mortgage lenders. It also has a network of regional offices which could be used for secondary market operations. Weighed against these and other advantages, however, are certain disadvantages. Central mortgage market-making functions are best performed if they are completely divorced from mortgage origination. This would be difficult to accomplish — if not in fact, at least in appearance — within the CMHC framework. Moreover, it may be difficult to create the image of a self-supporting and a market-orientated operation within the CMHC framework. American experience points out the importance of separating government housing support programs, which involve some sort of government subsidy, from strictly market operations. It is therefore recommended that the instrumentality chosen should be independent of the present operations of CMHC, both in fact and in appearance.

II. SELF-SUPPORTING OPERATION

It should be the policy of the RMMC to operate on a self-sustaining basis, earning an "economically justifiable" rate of return. Its only call on the Federal Government for funds should be in terms of its capitalization and a provision which allows it to borrow on a short-term basis from the Consolidated Revenue Fund.

III. TRADING FUNCTION

1. *Eligibility of Correspondents*

It is recommended that an "approved lender", as currently defined by CMHC, be eligible to enter trading operations with the RMMC. In addition, provision should be made to include — if not immediately, at least later — selected investment dealers, mortgage bankers, and other institutions and dealers who indicate an active interest in the secondary market for residential mortgage loans. The principal criterion for designating institutions and dealers to trade with the RMMC should be their capacity to assist in the development and maintenance of an active secondary market. Real estate developers as well as individuals should be excluded from trading with the Corporation.

2. *Eligibility of Mortgages*

To ensure that the RMMC trades only in good quality first mortgages, its operations should be restricted initially to trading in NHA mortgages and conventional residential first mortgages in good standing and insured against default by a company registered by the Superintendent of Insurance. Provision should be made to allow the Corporation, at a later stage and with the approval of the Governor in Council, to broaden its trading in conventional mortgages which have satisfactory quality characteristics.

Although there may be times when it might be desirable to purchase specific types of mortgages (multi-family rather than single family) and mortgages that have been originated or are held by institutions in specific areas (such as the Maritime Provinces), this must not divert the Corporation from its overall policy.

3. *Trading Techniques*

a) *Quoted Prices versus an Auction System*

There are two basic techniques which the RMMC could employ for its trading operations. It could buy and sell residential mortgages at quoted prices or by periodic or regular auctions.

Under the quoted prices procedure, the RMMC would announce sale prices at which buyers could purchase mortgages, and purchase prices at which offers would be accepted from sellers. With such a trading technique, once the Corporation had announced its prices, the market would determine the volume of trading.

Any system of quoted prices raises problems. The public inevitably expects that prices should be supported at some appropriate level. The institution assuming responsibility for administering prices is faced with difficulties

in managing its own liabilities in that it relinquishes immediate control over the volume of funds supplied and demanded. Posted prices could provide an inducement for holders of mortgages to liquidate their existing portfolios at prices maintained by the RMMC, thereby imposing sudden and unexpected strains on the Corporation without the assurance that the funds would be reinvested in mortgages. In the United States, the Federal National Mortgage Association (FNMA) started by posting prices but subsequently abandoned this procedure for an auction technique.

With an auction system, the RMMC would continuously process mortgages into *packages*, identifiable by type, amount, region, and other characteristics, in a form which would be attractive to potential purchasers. These packages would be offered for sale at regularly held auctions. The price at which offers were accepted would be determined by the Corporation's evaluation of mortgage market conditions and its responsibility to operate as a self-supporting institution.

Under an auction system, the RMMC also would issue regularly a notice stating the aggregate amount of funds it would make available during a related offer period for the purchase of residential mortgages. The Corporation would have the option of accepting less or more than the announced quantity available. The notice would specify the opening and closing date of the offer period and perhaps also the maximum amount that could be submitted by any one seller. The Corporation could allocate a specified amount of the funds it offered at auctions for the purchase of specific types of mortgages or mortgages originated or held by institutions in designated areas. Such an allocation of funds is not recommended, however, because it would tend to compartmentalize what will be a rather thin market for some time to come.

The amount of funds offered by the RMMC at its auctions would depend upon mortgage market conditions and the availability and cost of funds to it. When making its decision on the action it should take, the RMMC would have to be informed as to the savings flow to the major mortgage lenders, commitments for mortgages by various institutional groups, the prospective volumes of corporate and government demands for funds, and the course of monetary policy. In its decision-making process, the Corporation should be concerned with the availability of mortgage funds and with prices only as they affect residential mortgage flows.

It is impossible to legislate the specific trading technique the RMMC should employ at any given time. Different techniques may be appropriate for different market conditions. The institution must be given sufficient latitude to be able to choose the appropriate technique. It should be made clear from the start, however, that the primary *raison d'être* of its trading operations is to assist in stabilizing the volume of residential mortgage funds and mortgage prices only insofar as they affect the flow of such funds. The RMMC must display a high degree of flexibility to the point of being innovative in its trading techniques in order to encourage the development of an efficient secondary residential mortgage market. Failure to do so will only result in its accumulating a large portfolio of mortgages and becoming an indirect lender on a continuous basis, as has been the fate of CMHC.

b) Forward Commitments

Making commitments based on the future purchase of fully disbursed residential mortgages is not considered to be a function of a truly secondary market operation. If the RMMC were to sell forward commitments, it would be pledging its credit in support of the residential mortgage market and thereby providing assurance of a future flow of funds into the residential mortgage market. If lenders were assured that they had a definite commitment, they could plan their activity in the mortgage market with greater confidence and continuity. But insofar as forward commitments provide back-up funds for the origination of residential mortgages which the originator does not really intend to try to sell, they are tantamount to direct lending, which, it is assumed, is not to be a function of the RMMC.

There is an apparent need, however, for an institution to support mortgage bankers who have originated residential mortgage loans, but are unable to obtain interim financing readily because external conditions beyond their control have thwarted their efforts. Some reasonable solution should be considered. It is recognized that the practice of the RMMC's originating or helping to originate loans must not develop. By the same token, where other things are equal and a loan is a viable entity, consideration should be given by the Corporation to the support of such a loan.

Provision must be made so that abuses do not creep into the practice of forward commitment. The latter should be permissible only if proper safeguards are enforced. Such safeguards could be twofold:

1. The stand-by fee for a commitment could be set at such a level that the mortgage banker would give proper consideration to the feasibility of the loan, with a refundable feature so that on sale, the mortgage banker would not be penalized.
2. The mortgage banker could be required to continue efforts to dispose of loans after they had been taken up by the RMMC, with the understanding that his correspondent status could be withdrawn if the loans were not sold in the ensuing twelve months.

If it is thought desirable for the RMMC to have the power to make forward commitments, such power should be held in abeyance until the Corporation gains sufficient experience in its other operations; and then it should be granted only if it can be shown that forward commitments are a necessary and desirable tool to be employed by the Corporation.

Forward commitments would assure approved lenders a future market, at a specified price, for fully disbursed mortgages. Commitments could be made by the RMMC at prices which would be regularly posted, negotiated, or determined through an auction system. Terms for commitments could vary from ninety days to eighteen months, or even be geared to the term of construction projects. The Corporation would make a charge in the form of a commitment fee scaled to the term of the commitment contract. In the United States, the Federal National Mortgage Association allows mortgages against commitments to be sold to other buyers during the commitment period. This option procedure makes the FNMA, in effect, an insurer to the buyer of commitments against adverse changes in interest rates.

c) Size

The RMMC should establish the minimum dollar amount of individual packages of mortgages which it is prepared to buy and sell. The minimum acceptable transaction should be sufficiently small so as not to exclude the smaller institutional lenders and dealers. This minimum probably should be \$100,000 except in cases where the Corporation may require specific mortgages for packaging purposes.

The RMMC's purchases during any given period from any one lender or dealer might also be limited to a specified proportion — say, 25 percent — of the seller's total mortgage portfolio. As part of its operations, the Corporation will have to establish internal guidelines to prevent excessive dumping of mortgages.

d) Servicing

Sellers of residential mortgages to the RMMC will usually be expected to continue to service a mortgage. They must satisfy the Corporation that they have acceptable administrative facilities and personnel at such locations as may be deemed necessary for the proper and efficient administration of a loan. By agreement with the Corporation, however, servicing of a mortgage can be transferred to another approved servicer. The servicer's compensation will be an amount payable from the interest portion of each monthly installment applicable to the declining principal balance of the loan and specified as a percentage per annum of the principal amount outstanding. Under present circumstances, an appropriate servicing fee for NHA mortgages on single-family dwellings might be three-eighths of one percent per annum, with somewhat lower rates for mortgages on multi-family buildings. In cases of default and foreclosure, the servicer requires an additional fee to cover the extra costs involved.

e) Assignment of Mortgages

An assignment of the mortgages traded with the Corporation should be provided, similar to the one used by CMHC during its mortgage auctions. The RMMC should undertake to register the assignment of these mortgages in the purchaser's name, if so desired, but the cost of registration must be borne by the purchaser. These costs of registration vary from province to province. Most purchasers do not request such registration as mortgage administration is facilitated if the mortgage remains in the name of the servicing agent.

f) Market Information

The efficiency of any market is closely correlated with the availability of adequate market information. To facilitate trading in residential mortgages, the RMMC should make public the following information:

1. Prices and volumes of bids and offers on each type of residential mortgage eligible for trading
2. Prices and volumes of purchases and sales on each type of residential mortgage eligible for trading

This information should be available at least weekly, by province and by metropolitan and major urban areas.

4. Long-term Trading Policy

In its effort to reduce instability and make the flow of residential mortgage funds more uniform, one would expect the RMMC to be a net purchaser of mortgages in some periods and a net seller in others. The most difficult task facing the RMMC will be to act continuously as both buyer and seller in order to develop the market and at the same time to ensure that it does not become a dumping ground for mortgages. On occasion, it will undoubtedly have to accumulate a large mortgage portfolio, but this should be a temporary situation followed by a period of net liquidation.

IV. LENDING FUNCTION

1. Present Facilities

Under Section 11 of the National Housing Act (1954) and Section 28 of the Central Mortgage and Housing Act, CMHC may act as a lender of last resort to any holder of NHA mortgages who might find himself temporarily in a non-liquid position. Provision is made in the National Housing Act for advances up to \$100 million from the Consolidated Revenue Fund to the Corporation for it to "make loans to the holders of mortgages taken in respect of insured loans . . .". Its statutory authority allows CMHC to make loans to lending institutions out of its capital and reserve funds and out of moneys appropriated by Parliament for such purposes. Loans have to be secured by mortgages. In addition to making mortgage-secured loans, the Corporation has the power to purchase "debentures or other evidences of indebtedness, Guaranteed Investment Receipts or Guaranteed Investment Certificates" from a trust or loan company. This provision was probably written into the Central Mortgage and Housing Corporation Act (Section 28[ic]), not to provide temporary liquidity to an institution, but rather to protect it from insolvency. The creation of the Canada Deposit Insurance Corporation has removed the need for loans by CMHC to protect trust and loan companies from insolvency.

CMHC's facilities as a lender of last resort have been used infrequently, and not at all in recent years, because both CMHC and mortgage lenders have interpreted the terms of reference for its use very narrowly. CMHC has never given the impression that the facility might be used on a regular basis by the approved mortgage lenders to assist them in adjusting their portfolios.

2. Role of Lending Facility

It is recommended that the RMMC provide lending facilities on a regular basis, in the form of discount or other privileges, to approved mortgage lenders and investment dealers qualifying as designated correspondents. Such a facility would help lenders to stabilize their flow of residential mortgage funds. The seasonal rise and fall in the demand for mortgage funds differs from the seasonal changes in the net inflow of savings to many of the major mortgage lenders. Short-term loans would help to smooth seasonal fluctuations in lender operations. Aside from the seasonal asymmetry between outflows and inflows, asymmetry is inherent in the mortgage commitment pro-

cess itself. Because of the long lead-time schedule involved in the commitment-take-down-outpayment process of residential financing, mortgage commitments have to be made on the basis of anticipated savings inflows. A lending facility would serve to compensate mortgage lenders for short-falls in anticipated savings and induce them to supply a more stable flow of mortgage credit.

It can also be argued that the ready availability of a lending facility would induce some of the major mortgage lenders to concentrate a larger proportion of their portfolios in mortgage loans because there would be less need to diversify their portfolios for liquidity purposes.

The lending function of the RMMC is considered necessary to its development of a secondary market for residential mortgages. Even though it may be used infrequently, its availability will have an important psychological impact which will allay traditional fears of residential mortgage lending.

3. Lending Techniques

a) Eligible Users

The lending facility should be available to all approved (or designated) mortgage lenders and dealers. The banks probably will not use it as they have recourse to the Bank of Canada. The trust and loan companies, and perhaps also the mortgage dealers who warehouse mortgages, will be the most frequent users. The life insurance companies have said that they will use it reluctantly.

b) Terms and Conditions

The day-to-day terms and conditions for lending by the RMMC should be determined and made public by the Corporation.

The total amount of loans that any one lender may have outstanding to the RMMC at any one time could be specified as a percentage of his eligible residential mortgage holdings. This would closely relate the Corporation's lending functions to the borrower's activity in the residential mortgage market.

Until the RMMC gains experience, the maximum term of its loans should be six months. Loans could be renewed for a further six months; this would not be automatic, however, and the borrower would have to justify the request for extension.

Loans should be available on request from the RMMC, but at any time it should refuse a loan which does not meet the established guidelines of the Corporation. Normally, borrowers should receive loans on request only if their liquidity needs are associated with, or result from, their activity in the residential mortgage market.

From time to time, the RMMC would announce the interest rate for borrowing. The level of the rate could be related to the Treasury Bill rate, the bank rate, the prime rate charged by the chartered banks, or the current rates on NHA and conventional mortgages. Discussions with the institutions indicated that they would prefer a rate related to the chartered banks' prime rate, or to current residential mortgage rates.

Loans by the RMMC would be fully secured by a promissory note, which would be secured by an assignment of mortgages to at least 100 percent of the amount of the loan. If a mortgage that was held as collateral went

into default, the borrower would be required to substitute a mortgage in good standing.

V. DEFAULTS AND FORECLOSURES¹

Defaults and foreclosures occur even during periods of strong economic expansion. As far as most financial institutions are concerned, the resulting dollar losses have been negligible in the last twenty-five years. Defaults and foreclosures do, however, incur additional administrative effort and costs.

It is the Project Team's opinion that the Corporation should not gear itself to handle this problem, otherwise its purposeful direction will be deterred. This is not to say that it should be careless in its practices. As it evolves into trading conventional mortgages and builds up an inventory of conventionals, it will have to develop adequate quality control procedures.

In terms of the two functions of the Corporation, our recommendations are as follows:

1. Lending function. Whenever a loan pledged as collateral becomes three months in arrears, the borrower must replace it immediately with a loan or loans in good standing to an equivalent value.
2. Trading function. The RMMC must engage CMHC as agent at an appropriate fee to handle arrears, collection, and, if necessary, foreclosure and sale proceedings. This arrangement should provide that any loan three months in arrears be turned over to CMHC. It is realized that, in most cases, this will merely involve CMHC's dealing with the servicer. CMHC should have the right, however, to secure ownership of the mortgage and to act as principal, if this seems to be in its best interests.

VI. FINANCING²

1. *Capitalization*

Whether the Residential Mortgage Market Corporation is incorporated as a completely separate company or as a subsidiary of an existing corporation, a financial plan for incorporation must be devised. It could be argued that its initial level of activity will be low and that capitalization might be minimal. It could also be argued that this approach would create an image at the outset which would inhibit the role conceived for the Corporation in the capital markets.

Undoubtedly, the amount of initial capitalization is going to be determined arbitrarily, but a clue may be found by looking at some of the broad parameters:

1. Respondents to the Project Team's interview survey (see Appendix B) suggested that yearly trading could start in a range from \$50 million to \$500 million with an inventory gradually rising as high as \$1 billion to \$3 billion during the first three years of operation.
2. During the CMHC auctions of NHA loans in the early 1960s, the

¹ Based on a memorandum prepared by E. D. L. Miller.

² Based on a memorandum prepared by E. D. L. Miller.

high point of sales was reached in 1964 at \$150 million. (NHA mortgages were not as attractive then.)

3. The major lending institutions (chartered banks and life, loan, and trust companies) approved \$2.3 billion of mortgage loans on new residential construction in 1971 and an additional \$1.3 billion on existing residential property.

Therefore, in the context of arbitrary judgment, an equity base of \$200 million would seem appropriate. The first year or two may see disappointing volumes until the institution proves itself to the point of general acceptance. This equity base should be sufficient to enable it to borrow enough to support the size of inventory envisaged.

2. Short-term Debt

The money market in Canada has developed strongly in the last ten years. Short-term notes have found acceptance by an increasing number of institutions in their short-range cash flow management. More investment dealers are actively participating in the market.

The short-term promissory notes of the Residential Mortgage Market Corporation should therefore find a ready market, and in substantial volume. They would be adaptable to the lending function of the RMMC, which itself would be short term in nature. They would also have a major role to play in financing mortgage inventories. Experience in the United States suggests that at any given time such notes might comprise as much as 60 percent of the debt structure. It would be important, however, that in the early stages, at least, they be blanketed by a call on the Consolidated Revenue Fund. At first, this might be set at \$1 billion.

3. Long-term Debt

The long-term bond market in Canada has taken a severe buffeting from time to time in the past five years. This is not unique. It has happened in the United States and in other capital markets of the world. The effects in Canada, however, have been more pronounced in terms of reduced secondary market activity.

Nevertheless, the financial plan should contemplate long-term debt. The point has been made that it would not be desirable to conflict with debt or trust certificates issued by the trust and loan industry, as this might inhibit the natural expansion of lending by that industry, and thus be somewhat self-defeating in respect to the RMMC's ultimate goals. This argues for limiting the issuance of bonds having a maturity as short as five years. In time, of course, longer-term bonds would compete in the secondary market as maturity or redemption dates came with that period. It is probably important, however, that original issues do not compete directly.

The more difficult question is whether or not the bonds should have the direct guarantee of the Federal Government. There is an implied guarantee through the RMMC's being a government corporation with a call on the Consolidated Revenue Fund.

Our desire is to establish a market-oriented institution which will earn an economically acceptable rate of return. In this context, we feel that the

bonds need not have a direct government guarantee. Although the absence of such a guarantee will likely make the financing somewhat more expensive, it also could help to keep the institution market-oriented. In the short run, it would add to the pressure to function profitably; and in the long run, it could facilitate an eventual transfer of the RMMC to private hands, should that be considered desirable.

4. Public versus Private Sources

Implicit in the preceding paragraphs is the principle that public sources will provide the debt financing. The share capital should be common stock with nominal par value (possibly \$1.00 to \$5.00 per share), so that the Corporation will more readily lend itself to sale to the private sector in due course. The line of credit with the Consolidated Revenue Fund is not intended to be used except as necessary to ensure the Corporation's credit standing.

5. Liability Management

a) Control

In the early stages, at least, the RMMC would be a government institution backed by the credit of the Government, whether implied or direct. Its debt instruments would compete in the capital market with the direct obligations of the Government.

Recognition would have to be given to the overall scheduling of government financing under varying market conditions. The Department of Finance would need at least the right of veto on the timing and amount of new issues. This would not be so important in terms of issuance of promissory notes, as the Treasury Bill market is well structured and probably would not be impeded. The market for the promissory notes will be substantially different. By the same token, the rates will be higher.

b) Term Structure/Matching to Assets

Here we can only state certain principles as to the type and term structure of liabilities of the RMMC.

1. Initial financial requirements should be met by equity and money market borrowings.
2. The lending function should be financed by money market borrowings.
3. Experience with inventory build-up will dictate long-term debt funding. Ideally, this funding would be emphasized during easy money periods, with the money market being relied upon during periods of credit stringency. The RMMC would likely have its own inflow of funds from sale of mortgages during easier money periods, but this should not stop it from funding what would appear to be a basic inventory position. To some extent, the length of maturity of debt issues would be dictated by maturities of loans, but it would probably be in the seven to ten-year range for practical purposes.
4. The trading facility would have temporary swings in cash flow arising from routine minor shifts in inventories. Fund requirements for this purpose would be met by issuance of short-term paper.

c) Marketing

The Bank of Canada is the fiscal agent for the Government, and it might be a reasonable assumption that it should be the fiscal agent for the RMMC. In this way, conflicts on timing and amounts of issues presumably could be resolved relatively quickly.

If, however, the RMMC is to be a market-oriented institution and is to be viewed as such by the financial community, it would be desirable that it deal directly with and through investment dealers.

(i) SHORT-TERM DEBT

It would be logical to have the short-term promissory notes handled by the money market dealers approved by the Bank of Canada. There should be no regular tendering, but the trading desk should be actively in touch with this selected group of dealers, who now number fifteen.

While equitable distribution through these dealers must be a factor, performance should be the important determinant. It is likely that over a period of time some will become more active than others. All must be treated equally in terms of rates, and rates should be quoted regularly. This will not be difficult as investment dealers are publicizing weekly, and sometimes more frequently, the rates on a variety of money market instruments.

(ii) LONG-TERM DEBT

Debt issues of some municipalities are arranged by calling for tenders, but the more normal procedure for corporations is to have the issue underwritten by a syndicate of investment dealers with the terms being set by negotiation. To avoid any possible charge of discrimination, it would seem that two or even three syndicates of dealers should be set up, each with its own selling group. The RMMC would then deal with the syndicates on a rotating basis. This procedure, and particularly the methods used by provincial governments and their agencies, will need further study.

(iii) AMOUNTS AND RELATIVE RATES

There should be no difficulty in the short-term area with a revolving issue of \$300 million to \$1,000 million if there is a line of credit from the Consolidated Revenue Fund of \$1 billion. Two or even three years might be required to reach the upper limit. Obviously, flooding the market should be avoided, and the build-up should be gradual. Rates would depend on market conditions but would probably settle in the range between Treasury Bills on the one hand and bank and trust company paper on the other, once acceptance had been gained and an active market established.

Long-term debt issues should be marketable in amounts of \$75 million to \$100 million, and rates would likely settle around the Ontario long-term rate.

d) Mortgage-backed Securities

The question of whether the RMMC would issue mortgage-backed securities will become part of liability management in due course. It should not be attempted until the Corporation has gained at least two years of experience.

Chapter 4

The Potential Impact of a Residential Mortgage Market Corporation on Major Lending Institutions

by E. D. L. Miller, G. A. Golden, and J. A. Galbraith¹

To assess adequately the potential impact of a residential mortgage market corporation on Canada's financial infrastructure and, in turn, on the housing sector is a difficult if not impossible task. Chapter 2 outlined some of the consequences which would occur if, as a result of establishing an RMMC, an efficient secondary mortgage market developed. The observations in Chapter 2 are based on studies by Jones and Grebler in the United States,² on the contributions of members of the Special Project Team, particularly Professor Paul Halpern (see Chapter 6), and on discussions with mortgage lenders and investors in Canada and the United States.

This chapter presents additional information on the potential impact of an RMMC on loan and trust companies, insurance companies, and chartered banks. It consists of three submissions solicited from senior officers of the financial institutions discussed. Although the opinions expressed are those of the individual writers and do not necessarily reflect the official views of the institutions with which they are associated, they are probably broadly indicative of what the financial community foresees as the impact of an RMMC.

I. IMPACT ON TRUST AND LOAN COMPANIES

1. *Historical Perspective*

The first mortgage loan companies were established around the middle of the nineteenth century as savings and loan organizations. Much of their early borrowing was in the United Kingdom. Their lending was almost exclusively on residential property. The first trust companies came into being just before the turn of the century.

Until the late 1950s, trust companies were quite distinct from loan companies. Trust companies concentrated, by and large, on the trust business

¹ Part I is by E. D. L. Miller, part II by G. A. Golden, and part III by J. A. Galbraith.

² Oliver Jones and Leo Grebler, *The Secondary Mortgage Market* (Real Estate Research Program, University of California, Los Angeles, 1961).

and secondarily conducted an intermediary function. Also, mortgages were a relatively smaller investment for their intermediary funds than was the case for loan companies. Just prior to the last decade, the trust companies recognized that the potential profit in a mortgage-oriented intermediary function had increased relative to that of their trust business. As a result, their company and guaranteed funds expanded rapidly and the proportion of assets held in mortgages rose substantially. *Table 4-1* shows the trend.

Table 4-1

**TOTAL ASSETS AND PERCENTAGE HELD IN MORTGAGES, TRUST
AND MORTGAGE LOAN COMPANIES, 1950, 1960, AND 1970**

	<i>Trust Companies</i>		<i>Mortgage Companies</i>	
	<i>Total Assets \$M.</i>	<i>% Held in Mortgages</i>	<i>Total Assets \$M.</i>	<i>% Held in Mortgages</i>
1950	424	27	405	65
1960	1,302	36	914	76
1970	6,545	59	3,640	76

Source: Appendix A, tables A-6, A-7, and A-8.

The number of trust and loan companies increased substantially during the period 1950–1965, with all the new companies concentrating, at least initially, on the intermediary business.

While this change in emphasis from the trust business to the intermediary business received impetus during this period, there are still a number of major trust companies with relatively lower mortgage investment levels compared to the mortgage loan companies (see Appendix A, *Table A-9*).

2. Investment Strategy

Investment strategy is constrained by legislation as well as by management policy. Most companies are provincially incorporated and governed by provincial Acts, although there are a fair number which are federally incorporated and operate under federal Acts. Encouraged by the Trust Companies Association, there has been considerable effort in recent years directed toward uniformity of legislation in all jurisdictions, and some progress has been made. Whether federally or provincially incorporated, many companies operate on a national or at least multi-provincial basis and are thus subject to jurisdictional differences in legislation governing their affairs. These differences complicate the implementation of company-wide investment strategy.

Legislation bearing on investment strategy is both direct and indirect in its application. Directly, it limits the loan to value ratio on conventional mortgages to 75 percent, unless the excess is insured by an approved insurer. The amounts that may be invested in common stock and fixed assets also are limited. Qualification standards are established for investment in bonds, debentures, preferred stocks, and other securities. A “basket clause” per-

mits companies to hold approximately 7 percent of their assets in the form of unsecured loans and otherwise ineligible investments.

Limitations on borrowing powers and a requirement for statutory liquidity relative to borrowings are indirect constraints on investment policies. Generally, borrowing is not to exceed twenty times the excess of assets over liabilities. In respect to liquidity, generally 20 percent of demand deposits and term deposits maturing within 100 days must be held in the form of cash, bank deposits, and federal and provincial government bonds.

Although trust companies have become more like mortgage companies, the trust and loan companies differ in character and purpose in certain ways which affect, or are reflected in, their investment strategies.

In brief, the variations are as follows:

1. Some companies are regional (indeed local), while other companies are national.
2. More companies are provincially rather than federally incorporated.
3. Some companies still regard themselves as being primarily in the trust business, while most others are now concentrating on the intermediary function.
4. Some companies, including one of the major national companies, are heavily involved in money market operations.
5. A number of major companies have close affiliations with individual chartered banks.
6. Some companies are more aggressively into the real estate business—initially in real estate sales. Recent legislative changes permit establishment of real estate subsidiary companies in some jurisdictions. This may portend active participation by the companies in real estate development and ownership.

For these and other reasons, it is not possible to delineate a common industry investment strategy. What is pertinent, however, is the relative profitability of functions. The personal trust business is labor intensive, with highly skilled people operating under traditional and out-of-date remuneration mechanisms. It is increasingly apparent that the intermediary function, with an appropriate liability mix of demand and term borrowings of up to five years, can be more profitable if invested in mortgages and bonds, provided that the maturity of the portfolio is heavily weighted with five-year term mortgages. This is not to say that all aspects of the trust business are less profitable. Corporate trust business in terms of stock transfer agencies, trustee for bond and debenture issues, investment and pension funds, and other agency services can be quite profitable.

In the marketplace, trust and loan companies are endeavoring to be financial department stores in order to counter the competition of the chartered banks. They continue, however, to operate in all their traditional spheres where they have the expertise. Broader legislative powers will permit them to expand in real estate, in foreign subsidiaries, and in investment management and mutual fund operations. This expansion will evolve slowly over a period of years and only as the potential profit can be clearly seen.

In the meantime, and as long as mortgage investment maintains its

relative attractiveness, investment strategy is likely to become more oriented in this direction on an aggregate basis in the industry.

3. *Mortgages in Investment Strategy*

Trust and loan companies have traditionally sought to impound the true or longer-term savings of the public and invest these in bonds and mortgages. Bonds are held largely for liquidity purposes; mortgages, for higher income. Because of the higher and more stable income on mortgages, trust and loan companies have been able to pay higher rates for their deposits or borrowings than the chartered banks, whose investment vehicles have traditionally been shorter in term and subject to less stable interest earnings.

In the last two decades, trust companies have been investing more of their fast-growing company and guaranteed funds in mortgages. Currently, mortgage investment levels of major trust companies vary from 40 percent to 76 percent of their total assets (see Appendix A, *Table A-9*). This is a wide variation and is significant in terms of aggregate dollars involved in the industry. It suggests that there is scope for further increases in the mortgage orientation of the industry.

At least two factors have probably had a marked influence upon the proportion of trust company assets held in mortgages:

1. Mortgage investment requires expertise and an organization capable of administering volume. Fortunately, it lends itself to computer mechanization once volume has been achieved.
2. Traditionally, mortgages have not been considered liquid assets and are not considered liquid under statutory liquidity requirements.

These two factors have undoubtedly inhibited the expansion of mortgage investment by those companies that have considered themselves to be fundamentally trust companies. The second factor has influenced all loan and trust companies.

The development of expertise and organizational structures is merely a matter of time. Liquidity, on the other hand, is more a matter of judgment, on the part of both management and government regulatory and legislative bodies. There are some in the industry who would argue that since 1966 mortgages have had a higher degree of liquidity than bonds in the Canadian capital markets. This argument must be qualified, however, by the observation that higher loan to value ratios and longer amortization periods reduce the principal cash repayment in the early years. Thus, the liquidity also is reduced, unless the portfolio of mortgages is large and mature. The fact that the term of the mortgage is five years does not really improve the liquidity except during easy money periods, when liquidity is not so important.

4. *Significance of Trading Facility*

Ordinarily, loan companies and trust companies are not likely to use the trading facility of an RMMC for their intermediary business during neutral or even tight monetary conditions. They are more likely to use it during easier money periods, when mortgage demand is slow relative to deposit flows. During the early months of 1971, a number of companies would have been happy to purchase mortgages in quantity from an RMMC.

For a trust company, sale of mortgages to an RMMC is likely to occur only if a fundamental change takes place in its basic investment strategy with respect to company and guaranteed funds. In conducting its trust business, however, a company could use the trading facility more regularly in both purchase and sale of mortgages. Estate, trust, and agency accounts of the regular variety could find mortgages attractive investment vehicles. One of the practical constraints in mortgage investment for this type of account now is the lack of means of realization on distribution or termination of the account. (Trusteed pension funds are part of the E T and A business, but are considered separately in the next chapter due to the significance of their volume.)

An important recent development in the E T and A business is the establishment of mortgage investment funds, of which Royal Trust's M Fund is the classic example. The establishment of this fund was the first real attempt in Canada to provide a vehicle enabling the small investor to participate in mortgage investment. Because of its redemption feature, it needed liquidity. Since the Royal Trust did not have a high mortgage content in its own account, it was able to support the redemption feature with its own liquidity. Other companies, with higher mortgage to total asset ratios in their own accounts, undoubtedly feel that the redemption feature of such a fund would create a potential liquidity requirement they could not prudently guarantee. An RMMC could well be the answer to this problem.

These comments presuppose that the RMMC would be market oriented with pricing policies conducive to active trading.

5. Significance of Lending Facility

A major factor in cash flow management in the intermediary function of trust and loan companies is the time lag between approving a mortgage application and the subsequent draws of funds as construction proceeds. It is not a factor, of course, where the loan is being placed on an existing property, nor is it a problem for those companies with relatively low mortgage investment levels. It is a matter of concern, however, for those companies that concentrate more on construction loans and have a higher mortgage content.

These companies normally project their inflow of borrowings for the ensuing period, determine the level of mortgage investment they wish to attain, and then build up their commitment levels to meet this requirement. If commitments are concentrated in single-family residences, draws are likely to stretch over a two-month to six-month or eight-month period. On the other hand, if commitments are concentrated in multi-unit or high-rise construction, draws may be scheduled over a period of one, two, or even three years, depending on the size of the complex. Other significant factors having a bearing on cash flow are changes in prepayment patterns and strikes or work stoppages in the construction industry.

The key, however, is the realization of the projected borrowing by the trust and loan companies. While experience and an ongoing study of monetary, economic, and competitive conditions tend to reduce the guesswork, wide and unexpected swings can develop on a month-to-month basis. Adjustment of borrowing interest rates is the usual mechanism to bring the projected

inflow back on target, but a time lag can occur, particularly if competing financial institutions immediately make countervailing adjustments.

It is reasonable to envisage some companies using the lending facility of the RMMC to tide themselves over temporary aberrations in flows, provided that the cost of borrowing from the Corporation is not punitive. To be effective, loans have to be for periods of three to six months. During that time span, rate adjustments or altered mortgage approval policies can usually correct the flows.

As far as the E T and A area of trust operations is concerned, it is doubtful if the lending facility of an RMMC would be used except in most unusual circumstances. Even with such accounts as an M Fund, it is likely that the trading facility would be the more appropriate technique.

6. Impact on Mortgage Holdings

There is no way of gathering empirical evidence of the impact of the RMMC on mortgage holdings. In answering the Project Team's questionnaire, trust and loan companies did indicate that they would increase their proportion of mortgage holdings by amounts of from 5 percent to 20 percent. At the same time, some companies indicated that they were considering an increase in their proportion now for internal policy reasons. The profitability factor is likely to be the major determinant.

It is probably also true to say that the impact will evolve over a period of years as the institution proves its effectiveness in the marketplace. Obviously, if there is no RMMC, there will be no impact. If there is an RMMC, and if it is properly market oriented, it will have an impact of some dimension on both the intermediary and the trust functions of the industry.

II. IMPACT ON LIFE INSURANCE COMPANIES

1. Investment Strategy

While details of strategy vary considerably among the various life insurance companies, the nature of the liabilities assumed by a life company and the regulatory procedures surrounding the legality and valuation of assets have set broad parameters of investment behavior within which most companies operate. In general, because of the long-term nature of their liabilities, the companies are not inhibited from investing in long-term contractual fixed income assets. Until the credit crises of 1966, accompanied by persistent acceleration in inflationary pressures, lifted and maintained interest rates at historically high levels, the question of liquidity played a subordinate role in investment planning. The advent of high interest rates and restrictive credit conditions encouraged many policy holders to exercise their contractual right to borrow against the equity in their policies. As the bulk of policies at that time carried a contractual loan rate of 6 percent, with alternative sources of credit being offered at rates well over that, the cash drain on the companies became a significant factor in investment management. The prospect that in the years ahead, interest rates will remain at higher levels than the average during the 1950s and the first half of the 1960s suggests that liquidity considerations will continue to figure more prominently in

asset management than they have in the past. Nevertheless, as loan rates on new contracts are adjusted upward to be more in line with current market rates, and bearing in mind the large cash income arising from maturities and repayments of well-seasoned bond and mortgage portfolios, liquidity considerations will remain a minor rather than a major factor of investment policy, relative to the banks and investment trusts.

As income on assets in excess of that guaranteed for the build-up of policy reserves is an important contributor to a low net cost premium schedule and a strong financial reserve and competitive position, investment policy is strongly oriented toward maximizing income. In this context, mortgages have always constituted a significant percentage of the life insurance companies' investment portfolios. An additional attraction has been the fact that for year-end valuation purposes, mortgages are valued at cost rather than market prices, as is the case with bonds and stocks, thus insulating the companies' surplus position from the impact of fluctuating bond and stock market values. While an extensive administrative structure, involving regional and branch mortgage offices and long-standing relationships with builders and developers in the mortgage field, provides some limitation to the degree that investment funds are withheld from the mortgage market when rates become relatively uncompetitive, considerable flexibility exists.

Forward investment planning varies considerably among companies. Some companies, such as Sun Life, develop a fairly detailed investment plan for the year ahead and less detailed general plan for a period of five years. The starting input is an estimate of cash flow (net of policy loan requirements) for the year ahead. This flow is then tentatively allocated to the principal investment categories—mortgages, bonds, real estate, equities, and money market instruments—on the basis of interest rate assumptions developed from an overall economic and financial forecast for the year. This allocation is also influenced by an overall income target for the company. The timing of the allocation of funds to the various categories during the year is determined initially on trends developed in the basic economic and financial forecasts and adjusted by the actual trend of events through the year.

In recent years, life insurance investment management has been influenced by an increasing interest in an equity position in accrued assets either as common stocks or participations in real estate. The principal reason has been increasing interest both by saver clients and by the companies themselves in capturing the potential income growth that characterizes this type of asset. The principal limitations to holding any significant proportion of total assets in these forms are the vulnerability of a company's surplus position to a sharp decline in market values and the difficulty of bringing capital gains into the income account in order to maintain the overall earned rate, both for competitive reasons and in order not to discriminate in favor of later generations of policy holders at the expense of current policy holders.

2. Mortgages in Investment Strategy

As mentioned earlier, life insurance companies exhibit a strong orientation toward maximizing income in order to maintain a strong competitive posi-

tion, with the result that mortgages normally constitute a significant percentage of their portfolios. The yield attainable from a mortgage portfolio might be expected to exceed the yield from a portfolio of medium-grade bonds by one percent to one and one-half percent. There are a number of reasons for such a spread: the additional expense of running a mortgage portfolio, a widespread lack of confidence in the performance of mortgages on the part of many fund managers, and a high degree of confidence in the marketability of bonds. To a considerable extent, these considerations arise from a lack of familiarity with mortgages in particular and the real estate market in general. It may be pertinent to suggest that if the existence of an RMMC broke through some of these barriers, it might have the effect of narrowing the yield spread. This development might result in some diminution of interest on the part of traditional investors in mortgages. It would be extremely difficult to attempt to place a number on this possibility.

Marketability is associated with mortgage terms. Mortgages are normally written on relatively long contractual terms. Even five-year mortgages carry an implicit understanding that they will normally be renewed at maturity at the prevailing interest rate. Experience indicates that through a combination of regular amortization and some additional repayment privileges, an annual rate of turnover of roughly 6 percent to 9 percent may be expected from a mature portfolio. Factors which affect the rate of turnover are the proportion of house loans, the ease of money supply in the period in question, and the absolute level of interest rates. Because of the comparatively high mobility of the population and the provisions of the Canada Interest Act, the turnover is greater in a portfolio with a high percentage of house loans. Chartered banks and trust companies with shorter-term liabilities are showing an increased interest in this area, and this may have contributed to the fact that many life companies have tended to reduce their emphasis on this aspect. The other factors are more or less self-explanatory. Some of the life insurance companies have certainly seen a decrease in the rate of turnover (currently at the lower end of the suggested range), which they ascribe to a combination of tightness in the money supply and the relatively high level of interest rates prevailing in recent years.

Perhaps it is fortunate that, in practice, individual companies have different ideas as to a suitable portfolio mix for their total investments. In the insurance industry, the proportion invested in mortgages typically ranges from one-third to two-thirds of the total portfolio or, in rare cases, even higher. There are a number of factors which may have an influence, and it is extremely difficult to generalize in this regard. Individual companies have been subject to different historical backgrounds that have influenced the make-up of their investment divisions. Companies vary in their relative interest in sophisticated investment techniques.

In recent years, there has been a growing tendency on the part of virtually all companies to place greater emphasis on assets which give some protection against inflation by providing opportunity to participate in growth. Dealing purely with property investments, this factor has influenced a bias toward mortgages with some form of participation, and away from mortgages into joint ventures with developers and direct investment in real estate

equities on the company's own account. The latter developments have probably been, and are likely to continue to be, at the expense of growth in the mortgage portfolio.

All these factors have tended to create a reduced interest by long-term investors in mortgages on single-family dwellings, because of their relatively shorter average life, the lack of opportunity for participation, and the current trend toward marginally lower rates for home mortgages. (The last feature is something of a paradox, since these mortgages are more expensive to service and presumably reflect a change in the supply/demand relationship resulting from the increased number of new lenders in this particular field. This may have relevance in terms of the earlier comment about the possible side effect of the existence of an RMMC on supply of and demand for mortgages.)

While the legal constraints from which mortgages suffer may not be directly relevant to consideration of an RMMC, they do have an influence on the house mortgage market. There are a number of rigidities which must militate against flexibility in this area. Among these are the relative cost of borrowing, particularly reborrowing, and complications which limit flexibility. For example, open-end mortgages should be popular, but the legal implications tend to restrict the practice. This probably has a bearing on the fact that while extra non-contractual prepayments are frequently permitted, experience seems to indicate that not much advantage is taken of the opportunity. If mortgages were open-ended (that is, if the process were reversible), it is likely that there would be more activity in this regard. Finally, on the subject of legal procedures, in the event of default the complexity of obtaining recourse, both in terms of cost and time, has an inhibiting effect on some lenders. In many jurisdictions, there are opportunities for prolonged delaying tactics; and at least in some areas, the courts tend to favor the "little borrower" against the corporation.

3. Significance of Trading Facility

An important question is whether the lack of a trading facility has had a material influence on the policy of investors, particularly with respect to the absolute limit on the percentage of assets invested in mortgages. Would the existence of an RMMC tend to build confidence in the minds of investors that a ready market is available at all times? At best, it would seem to be extremely difficult to establish anything remotely resembling the free market that normally exists in the bond area, namely, a widely based market with hour-to-hour quotations and both long and short opportunities for trading profits. In the mortgage area, it is probable that the market will be largely artificial, dependent for many years on the support of government backing, and subject to whatever policy constraints arise from this fact. The existence of an RMMC would give investors some confidence that mortgages are not locked in but could be traded in an emergency. The question is whether the market will be viable in the ordinary trading sense, as opposed to representing a market of last resort.

4. Significance of Lending Facility

Comments under this heading must be related to those in the previous section. It seems certain that the existence of a facility that is, or may be, available to meet all expected short-term demands for funds should tempt certain investors to allocate higher proportions of their funds to mortgages. It is probable that a fear of being locked into a mortgage portfolio has been a deterrent to some investment fund managers. It is doubtful whether this aspect would have a significant effect on institutional investors with a long-term point of view and who are now active in the mortgage area. The typical insurance company with a mortgage portfolio accumulated over the years will have developed confidence in its ability to estimate the flow of funds normally derived from its mortgage portfolio. We doubt if the existence or absence of a lending facility will have a very marked influence on the percentage of assets earmarked for mortgage lending.

5. Impact on Mortgage Holdings

It is not too likely that the creation of an RMMC would have a very profound effect on the investment strategy of insurance companies. Insurance companies have reasonably predictable cash flows, and over the years have developed confidence in mortgages as a useful and manageable form of investment for their funds. In these circumstances, most life insurance companies would not expect to make heavy demands on an RMMC. In the final analysis, one would have to say that these companies do not consider that the creation of such a facility would have a very significant effect on their investment policy.

There is a growing tendency for life companies to enter into new product areas associated with segregated funds of one type or another. They do not consider that liquidity considerations would deter them from offering a mortgage fund if they were otherwise so disposed. Some comfort, however, might be derived from the existence of such a facility, and in particular it might have an influence on the flexibility of the contract offered to individual investors. Because companies are concerned with the possibility of heavy redemptions, it is customary to build in protective clauses calling for notice of intention to withdraw. It is not their experience that this protection has been widely used, but it does exist and it is at least theoretically possible that the existence of an RMMC would make such protection less necessary. The life companies doubt that the clauses now found in such contracts deter many investors, but it is possible to argue that anything that would simplify the contract might make the product marginally more attractive.

All in all, the impact of an RMMC must be measured by its effect on institutional investors not now heavily involved in the mortgage market. There is no reason to believe that it would have a significant effect on the portfolio profile of life companies; but they are prepared to accept the fact that it might encourage banks, and particularly pension fund managers, to increase their exposure to this form of investment.

III. IMPACT ON CHARTERED BANKS

Any impact the establishment of a residential mortgage market corporation will have on the chartered banks obviously depends on what it does and how it does it, assuming that it becomes successful.

As conceived in this volume, an RMMC is seen as fulfilling a market-making role, serving as a catalyst in developing a secondary market for residential mortgages. To do this, it will have both a trading and a lending function. Hence, the potential impact of an RMMC on the banks can be analyzed in terms of the market-making role, and in terms of how the trading and lending functions may be carried out. The discussion will be kept general so as to increase its applicability for assessing the various particular forms that an RMMC may take.

1. *The Market-Making Role of an RMMC*

If an RMMC succeeded in its market-making role, it would result in existing mortgages becoming more liquid or marketable. Improved marketability for mortgages might enable the banks to engage in more mortgage trading, just as increasing the marketability of any other type of banking asset—such as long-term corporate bonds—would enable the banks to do more trading in those assets. But greater marketability for mortgages in itself will not make a significant change in or difference to banking.

There would be a more significant impact if the banks, through an RMMC, could use residential mortgages for adjusting their liquidity positions. They could do this if the RMMC bought mortgages from the banks in tight money periods and sold mortgages to the banks in easy money periods.³ The banks would then have an additional asset to use for adjusting their liquidity. But if the Bank of Canada considered this greater access to liquidity by the banks to be an offset to monetary policy, it could bear down harder on the banks in tight money periods and let up more in easy money periods than it would do otherwise. In that case, monetary policy would have to swing more sharply as the banks used mortgages more actively in their liquidity management. Weighing the advantages for individual banks of an improvement in their liquidity adjustment process against the difficulties caused by sharper swings in monetary policy, it is doubtful that in these circumstances the banks as a group would be any better off than they are now.

A significant improvement in the secondary mortgage market, especially if it led to the development of other types of financial institutions, would represent a structural change in the financial system outside the banking system. It is now generally accepted that financial growth and enhanced financial activity outside the banking system are usually at the expense of the banking system; that is, the size of the banking system is a policy-determined variable

³ This perhaps explains why five banks, in responding to question 34 of the Project Team's questionnaire on a proposed mortgage bank, expressed the opinion that a residential mortgage bank should increase its inventory of mortgages in tight money periods and reduce them in easy money periods (see Appendix B of this volume). As pointed out below, this mode of operation could have adverse effects on the growth rate for the banking system.

which is altered inversely with growth or increased activity elsewhere in the financial system.

Over a period of time, a truly successful market-making RMMC might result in some loss of place for the banks in the financial system. This, in itself, is neither bad nor good. In a freely competing economy, different industries are constantly losing or gaining ground. What would be questioned by many, however, is a structural displacement of the banks brought about by artificially induced means. If the RMMC's success in market making depended on some kind of subsidization, such as preferred financing from the Government, the desirability of its long-term impact on the banks would be subject to question.

2. The Trading Function of an RMMC

To make a market in residential mortgages, an RMMC would have to buy and sell mortgages—that is, it would have to perform a trading function. It may try to do this in a strictly neutral fashion so as not to influence the mortgage market. To act neutrally in buying and selling existing residential mortgages, an RMMC would have to buy mortgages only to sell them right away; and when it sold, it would have to try immediately to replace the mortgages sold by making new purchases. Operating in this way would tend to keep its inventory of mortgages relatively constant. It would hold inventory only to the extent necessary to allow for short-term frictions in adjusting its purchases and sales.

An RMMC that operated in this way in the secondary market for mortgages would be neutral in the mortgage market. It would not interfere with the market determination of mortgage rates because it would be responding to basic demand and supply forces in the secondary market for mortgages. This assumes that in so responding, an RMMC would not be forced into taking short or long positions in mortgages of sufficient size to have a significant influence on the market.

Assuming that an RMMC could carry out its trading activities in a neutral way (which means operating with a relatively constant inventory), its size, once established, would not be affected by its trading activities. As a neutral trader, it would not require financing in conflict with other institutions—that is, since it would not be a growing institution, it would not need to tap additional sources of funds in competition with other borrowers in carrying out its trading function.⁴

By maintaining constant mortgage inventories through periods of easy and tight money, an RMMC would not adversely affect monetary policy. A constant level for its mortgage inventories would mean that an RMMC would not be growing in size during a tight money period. It is only when a financial institution grows during a tight money period (or shrinks during an easy money period) that it can be said to be offsetting monetary policy.

⁴ This assumes that any financial instruments an RMMC might sell or issue, secured by the mortgages it has bought, would be treated by their holders as simple substitutes for the mortgages themselves. If the instruments were not so treated, the RMMC would take on the appearance of a straightforward financial intermediary, issuing its own debt instruments in order to purchase and hold mortgages. As such, it would be operating, not as a neutral trader, but as a near-bank.

If, however, the proposed RMMC, in trying to operate as a neutral trader, were forced to assume significant short and long positions in mortgages, it would run into conflict with other borrowers and with monetary policy. For example, if in a period of tight money, the RMMC's holdings of mortgages rose to a significant extent, it would be drawing upon existing pools of funds for financing. By growing in size in a tight money period, the RMMC would be moving in an offsetting direction for the effectiveness of monetary policy. Consequently, the Bank of Canada would have to take offsetting action by bearing down harder on the banks.

An RMMC that operated in a neutral way by keeping its mortgage holdings constant at a necessary working level for market-making purposes would not interfere with monetary policy and would not produce adverse monetary effects for the banks. Nor would it be an active competitor for funds.

It follows from the foregoing discussion that if an RMMC decides to carry out its trading function so as to influence mortgage market conditions, it will have an impact on mortgage rates, the competition for funds, and monetary policy. More specifically, an RMMC may decide to carry out its trading function so as to modify movements in mortgage rates. This would require it to be a net buyer of mortgages as rates are rising and to be a net seller of mortgages as rates are falling. (Indeed, for an RMMC intent on making maximum profit, this would be the ideal way for it to do so.) Consequently, its inventory of mortgages would rise in tight money periods and fall in easy money periods. And in periods of tight money it would be seeking and gaining the financing it needed to carry out its mortgage rate policy, presumably (in this case) without regard to the cost of that financing.

This means that the size of the RMMC would vary inversely with the direction of monetary policy. For example, an RMMC would grow in periods of tight money and in so doing could have the same perverse effect on the tight money policy as would the growth of any near-bank under similar circumstances; that is, it would be operating in opposition to general monetary policy.⁵

The impact on the banks in this situation would depend on whether the banks were getting their share of the trading business with an RMMC. If, in the buying and selling of mortgages, an RMMC were dealing with all financial institutions, including the banks, on an equal basis—so that the banks had the same opportunity as other investors to do their proportion of the business with an RMMC—there would be no relative disadvantage to the banks. Monetary policy, however, would have to be tighter in restrictive times (easier in slack times) to affect the counteracting effects of an RMMC on monetary policy. Thus, monetary policy would have to swing

⁵ It is readily admitted by those in favor of an RMMC that performing as a stabilizer of mortgage rates might result in such an institution at times operating in opposition to monetary policy. See J. V. Poapst, "Research and Development in the Residential Mortgage Market", *The Canadian Banker*, Vol. 78, March-April 1971.

more sharply than otherwise when an RMMC let its inventories move counter to monetary policy.⁶

A distortion, and a disadvantage to the banks, would be introduced if the trading of an RMMC which ran up and down its mortgage holdings contrary to monetary policy favored or was biased in the direction of non-bank mortgage investors. Those investors would be able to pursue their financial activities in periods of tight money, when the banks were being restricted, and so gain an advantage over the banks. The Bank of Canada, by offsetting the effects of the other financial institutions, would bear down harder on the chartered banks, thus retarding the growth rate of the banks.

It is only necessary to recall the experience of the banks with monetary policy in the late 1950s and early 1960s to appreciate the impact on them of a new type of financial institution operating in an offsetting fashion for monetary policy. In the tight money climate of those earlier periods, near-banks were, for a variety of reasons, able to grow relative to the banks in a way that tended to offset monetary policy. This caused the Bank of Canada to be more restrictive on the banks than would have otherwise been necessary. Consequently, the banks lost ground in the financial system in those periods.

If the operations of the proposed RMMC had the same impact on the banks, it would mean diminishing the role of a major mortgage lender—the banks—in the financial system. Hence, an RMMC that operated as a significant influence in the mortgage market could have an adverse impact on the banks and would have a cost for monetary policy.

If an RMMC set out not only to stabilize mortgage rates, but also to make the long-term general level of mortgage rates lower than it otherwise would be, it would be on balance, over time, a net buyer of mortgages. The RMMC would be on an upward growth trend, and its ability to affect monetary policy adversely would be continuously increasing with the passage of time, since its growth would occur at the expense of the banks.

3. *The Lending Function of an RMMC*

The lending function of an RMMC, as conceived in this volume, is to help non-bank mortgage lenders to arrange more easily for their liquidity requirements. If that lending function is sufficiently restricted to provide only for extreme conditions or as a lender of last resort facility, there will be no significant impact on the banks.

If an RMMC exercises its lending function in a way that enables non-bank mortgage holders to operate with less liquidity, it could possibly expose the banks to an element of unfair competition. Non-bank mortgage-holding institutions, having easy access to RMMC loans for liquidity purposes, might forego holding sufficient assets themselves to provide for liquidity and thus avoid a cost — a cost of holding sufficient assets in low-yielding liquid forms

⁶ An RMMC that let its mortgage holdings vary directly with monetary policy would enable monetary policy to proceed more smoothly, with less swing. That an RMMC might operate this way was proposed by H. H. Binhammer in *Monetary Implications of the Operations of Central Mortgage and Housing Corporation with a Proposal for the Establishment of a Central Mortgage Bank*, a paper submitted to the Royal Commission on Banking and Finance, *mimeo.*, 1964.

to provide for liquidity. The banks and other lenders that bear the cost of providing for liquidity themselves would be placed at a cost disadvantage (unless they too could use mortgages for liquidity adjustment).

4. *Conclusion*

The impact which an RMMC may have on the chartered banks depends on how successful it is in improving the secondary market for mortgages, and on how it carries out its trading and lending functions. A truly successful RMMC will have a structural impact on the financial system, at the expense of the growth of the chartered banks, which might or might not be compensated for by increased profits for the banks resulting from greater activity in the secondary mortgage market.

At a day-to-day operating level, if an RMMC can function effectively in the market in a strictly neutral way, and if it suitably limits its lending function, it should not interfere with monetary policy or adversely affect the banks. Its impact on the banks will be minimal and will be beneficial if it succeeds in naturally fostering a better secondary market for mortgages. The impact on the banks will be greatest, and adverse, if an RMMC attempts to influence mortgage rates through its trading function and if it exercises its lending function too liberally.

Chapter 5

Potential Residential Mortgage Investment by Trusteed Pension Funds and the Impact of a Residential Mortgage Market Corporation

by W. R. Waters

INTRODUCTION AND SUMMARY

The assets administered by trustee pension funds are substantial and growing rapidly. At the end of 1970, their book value was approximately \$11 billion.¹ Collectively, these funds are currently Canada's second largest non-bank financial intermediary. The assets of life insurance companies exceeded those of trustee pension funds by only \$3.9 billion in 1970;² the much higher growth rate of the latter suggests that they will become the largest in only a few years. Careful estimates of the 1976 level suggest that \$30 billion is a conservative figure.³

In view of their size and growth rate, it is understandable that analysis of the investment behaviour of trustee pension funds has become a popular activity in both Canada and the United States. In the late 1950s and early 1960s, the major concerns of students of pension fund growth were the rate at which these funds were accumulating assets and the impact that the existence of pension plans had on the aggregate level of saving.⁴ More recently, however, interest has shifted to the forms of investment undertaken by the funds. Initially, attention was focused on the amount of funds they had invested in equity securities,⁵ largely because of concern with the ability of

¹ Statistics Canada, *Trusteed Pension Plans Financial Statistics, 1970* (Cat. No. 74-201), Table 3.

² The book value of assets held in Canada by life insurance companies at December 31, 1970, was \$14,960 million. (*Bank of Canada Statistical Summary*, November 1971, p. 873.)

³ T. J. Courchene and T. R. Robinson, "Contractual Savings With and Without Carter", Report No. 6801, Institute for the Quantitative Analysis of Social and Economic Policy (University of Toronto: February 1968, pp. A.6-A.17).

⁴ Two major studies on this subject have been summarized by J. W. L. Winder, "Discretionary Personal Savings", Report No. 6802, Institute for the Quantitative Analysis of Social and Economic Policy (University of Toronto: February 1968, pp. 25-31).

⁵ At the end of 1970, the market value of common stocks held by trustee pension plans was \$2.8 billion. (Statistics Canada, *op. cit.*, Table 3.) This amount is the highest of all Canadian financial institutions, with the possible exception of Canadian mutual funds.

Canadians to finance Canadian economic activity.⁶ High interest rates and concern for the size of Canada's housing stock have stimulated the Federal Government's interest in the current and possible levels of mortgage investment by trustee pension funds.

The Federal Government's interest and involvement in stimulating mortgage investment by private sector financial institutions is well known. The 1954 National Housing Act attests to this. Also well known among financial practitioners are the "drawbacks" of mortgages as investments,⁷ particularly the problems deriving from the difficulties associated with their resale subsequent to initiation. A residential mortgage market corporation has frequently been proposed as an additional component of the financial system, designed — in the economist's jargon — "to reduce the imperfections in the secondary mortgage market".

This paper is not concerned with whether or not a residential mortgage market corporation could, in fact, accomplish this end. Rather, it takes this as given and then explores the possible effect of such an institution on the level of investment in mortgages by trustee pension funds. More particularly, the paper is concerned with four questions, all of which take as given the existence of an RMMC. They are as follows: (1) What proportion of trustee pension fund assets might ultimately take the form of mortgages? (2) At what rate might this ultimate proportion be approached? (3) What annual increment in mortgage investment do the answers developed for the first and second questions imply? (4) To what extent might an RMMC's facilities be used by trustee pension funds to reduce the size of their mortgage portfolios?

As might be suspected, the answers developed for all questions are highly conjectural. A general knowledge of mortgage markets and other financial markets, elementary economic theory, and fragmentary data from a variety of sources were the major inputs to the estimating process.

The paper is divided into four sections. Section I contains observations on historical developments and factors influencing the composition of trustee pension funds' investment portfolios. Although most of the observations relate to Canadian funds, the investment practices of United States non-insured pension funds also were examined briefly.

Canadian data were examined for the period 1957–1970. We found that portfolio composition has changed dramatically over this period. For all funds as a group, there has been a substantial shift from fixed income to variable income securities. The major change in emphasis has been from bonds to common stocks. Although very little change occurred in the proportion invested in mortgages, there were periods in which non-insured mortgages appeared to be acquired at a faster rate than insured residential mortgages.

⁶ The major study undertaken on this subject was G. R. Conway, *The Supply of, and Demand for Canadian Equities* (Toronto: The Toronto Stock Exchange, 1968).

⁷ See, for example, A. Walling Ruby, "Selling Mortgages to Pension Funds", a paper presented to the Second Conference on Mortgage Investments for Trustee Pension Plans, Government Conference Centre, Ottawa, December 8, 1970, esp. pp. 7-11 and 14-17. For a U.S. view, see Sherman J. Maisel, "Can the Mortgage Market be Made More Effective?", Remarks made at the Annual Convention of the California Mortgage Bankers Association, Palm Springs, California, April 14, 1967.

There were, however, marked differences among various types of funds. On the one hand, funds sponsored by provincial and municipal governmental organizations invested the bulk of their assets in bonds, with only a very small proportion invested in mortgages. On the other hand, funds sponsored by Federal Government agencies and Crown corporations shifted dramatically from bonds to common stocks, all the while maintaining a substantial proportion of their assets in mortgages. Funds sponsored by industrial organizations also shifted dramatically to common stocks, but invested only a small proportion of their assets in mortgages. Finally, we found that relatively small funds invested a substantial proportion of their assets in pooled funds.

From our examination of the historical record, we concluded that (1) it would probably take more than the introduction of an RMMC to change dramatically the proportion of assets invested in mortgages by provincial and municipal funds; (2) the existence of an RMMC would result in federally sponsored funds increasing only marginally the already substantial proportion of their portfolios invested in mortgages; (3) relatively small funds were unlikely to change their investment patterns because of the existence of an RMMC; and (4) the larger funds sponsored by industrial organizations comprised the group most likely to increase its proportionate investments in mortgages if an RMMC were introduced.

The analytical framework for our estimates of an RMMC's impact was a "stock-flow" adjustment portfolio model of investment behavior. The model is presented in Section II. Essentially, it is based on the premise that, given expected yields and other conditions prevailing in the markets for various types of assets, a financial institution wishes to have a particular "target" proportion of its portfolio invested in each type of asset. Assuming that the present proportion differs from the "target", the rate at which the actual proportion moves toward the target will be a function of several factors, the most important of which are certain characteristics of the institution's cash flows and the current differences in yields, relative to long-term normal differentials, among assets.

Section III is devoted to formulations of the mortgage investment targets, discussions of the extent to which an RMMC's facilities might be used in achieving the targets, and estimates of the effect of an RMMC on the level of investment in mortgages by trustee pension funds.

To establish an estimate of the target proportion for mortgages that might materialize if an RMMC existed, we determined the proportions currently invested by funds which, in our view, did not have their current investment practices constrained by the problems which an RMMC might alleviate. Specifically, we determined the proportions invested in mortgages by (1) large industrial funds, (2) the funds established for the employees of certain trust companies and chartered banks, and (3) the pooled funds operated by trust companies and the segregated funds operated by insurance companies.

We concluded that a reasonable target was between 17 and 20 percent. An important qualification, however, was the assumption that the structure of relative yields over the period during which the observed proportions were developed would also prevail after an RMMC was introduced. If the RMMC did its proposed job well, and if yields on mortgages currently include some

allowance for the supposed drawbacks that the RMMC would eliminate, then the structure of yields would very likely change. Indeed, with a change in this structure, some funds which are heavily invested in mortgages might well reduce the mortgage proportion.

We also attempted to ascertain indirectly whether any funds would be more likely to invest in mortgages if an RMMC were established. This was done by a mail questionnaire survey of a number of funds. The questions bearing most directly on the potential usefulness to them of an RMMC solicited the funds' views on whether various features of the mortgage instrument and market were unattractive or inhibiting from an investment point of view. In general, the answers indicated that the RMMC's proposed activities do relate to features which currently inhibit mortgage investment by trustee pension funds.

To estimate the rate at which the target proportion might be approached if an RMMC existed, we assumed that the structure of relative yields would not change and that the proportion of net cash flows allocated to mortgages was the only decision variable. To establish the latter, we examined two items: (1) the proportion of net cash flows (defined to suit the data available) historically allocated to mortgages by funds heavily invested in mortgages (i.e., the funds of federal agencies and Crown corporations); and (2) the proportion of net cash flows allocated to common stocks by industry-sponsored funds. From these data, we concluded that between 20 percent and 60 percent of net cash flows could be used to purchase mortgages. We selected 30 percent as the most likely figure.

We developed several estimates of the potential increment in mortgage investment by trustee pension funds for the period 1972–1976. The estimates were based on various combinations of (1) growth rates in the funds' net cash flows, (2) target proportion for mortgage investment, and (3) proportion of net cash flows to be allocated to mortgages. The estimates were found to be particularly sensitive to the values assumed for the target proportion and the proportion of net cash flows allocated to mortgages. Our single "best" estimate of the potential increment was \$120 million in the first year, increasing to \$194 million in the fifth year.

Section IV contains a discussion of the extent to which trustee pension funds are likely to be concerned with portfolio rebalancing and a secondary mortgage market. The emphasis is placed on the factors giving rise to portfolio rebalancing — for example, changes in investment goals, changes in the relative attractiveness of investment media, predictability of cash flows, and transactions costs.

We concluded that trustee pension funds would sell a very low volume of mortgages to an RMMC from their portfolios. We based this conclusion on their very low requirement for portfolio realizability. The case for the latter is based on the fact that the bulk of these funds will continue to experience positive cash inflows (the values of which are highly predictable) for a substantial period of time, and on our conclusion that changes in investment policy are unlikely to necessitate a substantial switch in portfolio assets over a short time period.

I. HISTORICAL BACKGROUND

1. *The Composition of Canadian Funds' Portfolios*

The purpose in examining historical developments in the composition of trustee pension funds' investment portfolios is to obtain some clues concerning the extent to which fund managers might ultimately acquire mortgages. In particular, we wish to determine the strength of the factors which have motivated fund managers to change the form of their investments in the past. All of this is done in order to evaluate whether or not the introduction of an RMMC would be an event significant enough to result in a marked change in fund managers' propensities to acquire mortgages.

Data are examined for the period 1957–1970. The starting year was the first for which data on the investments of trustee pension plans were presented on a continuing systematic basis by Statistics Canada. The last date is the latest for which data are currently available.

The most obvious development over the entire period is the unbroken fall in the proportion of total assets invested in bonds and the unbroken increase in the proportion invested in stocks (primarily common) and in pooled funds and mutual funds (see *Table 5-1*). While a variety of factors undoubtedly contributed to these developments, rising wage rates, improved pension benefits, and inflation (both actual and expected) were almost certainly the three major factors.

In the first half of the period, rising wage rates and improved pension benefits were the two major factors. (Inflation had not been a problem since the early 1950s.) Faced with the need to fund ever-increasing levels of pension benefits, fund sponsors must surely have been impressed by the apparent potential of common stock investments to ease their funding burden, even if their investment advisers (who probably had longer memories) were not. In the 1950s and early 1960s, Canadian common stocks consistently provided markedly higher returns than bonds. The average annual rate of return on the Toronto Stock Exchange Industrial Index was in the order of 15 percent for the period 1950–1965.⁸ In contrast, the yield on long-term Government of Canada bonds never exceeded 6 percent (see *Figure 5-1*). Pension fund managers could hardly help being impressed by these differences, particularly when the additional risks associated with common stocks probably seemed more theoretical than real. All in all, therefore, the increasing emphasis on common stocks seems eminently reasonable.⁹

Beginning in 1965, a new factor began to make its presence felt. Inflation, and the widespread expectation of more of it, began to play havoc with bond prices. Indeed, it is hardly an exaggeration to say that “all hell began to

⁸ The average annual change in the Index (based on year-end closing values) was 11 percent. The average annual dividend yield was in the order of 3½ percent.

⁹ In view of the large difference in returns between bonds and common stocks, one might reasonably ask why the shift was not even greater than that observed. The explanation may be that many funds sponsored by government bodies are looked upon as captive purchasers of the subject government's own bonds, and hence not free to implement investment policies directed toward obtaining the highest possible expected return for a given level of risk.

Table 5-1
**PERCENTAGE DISTRIBUTION OF PORTFOLIO HOLDINGS,
 CANADIAN TRUSTEED PENSION FUNDS,
 1957-1970**
 (Book Values)

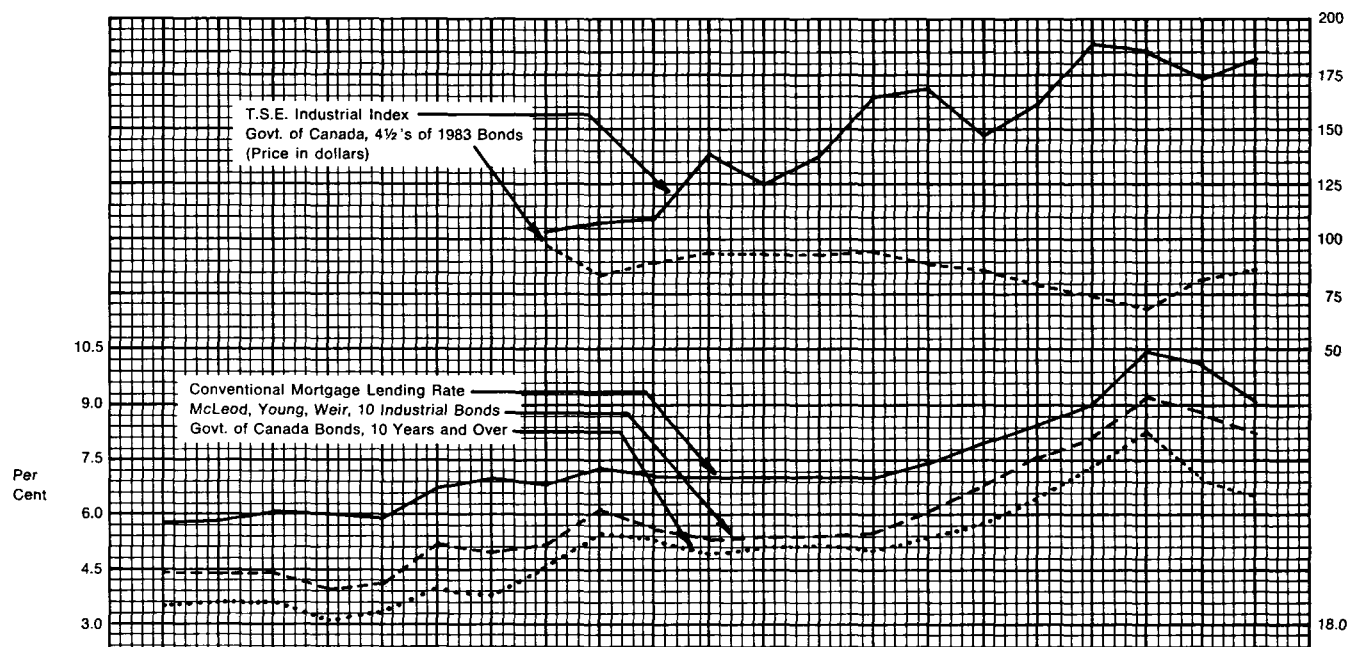
<i>Percentage of Portfolio Held in</i>								
<i>Year</i>	<i>Mortgages</i>			<i>Pooled Mutual and Funds</i>	<i>All Bonds</i>	<i>All Stocks</i>	<i>All Other Assets</i>	<i>Total Assets (\$ Millions)</i>
	<i>NHA</i>	<i>Other</i>	<i>All</i>					
1957	4.0	3.2	7.2	0.6 ¹	80.6	6.3	5.3	2,459.5
1958	5.0	3.2	8.2	1.2 ¹	78.0	7.5	5.1	2,814.0
1959	5.6	3.1	8.7	1.7 ¹	77.4	7.9	4.3	3,200.5
1960	5.4	2.9	8.3	2.9	77.0	8.4	3.4	3,616.3
1961	5.6	2.8	8.4	4.0	74.7	9.6	3.3	4,074.1
1962	6.0	3.0	9.0	4.9	72.0	11.0	3.1	4,572.4
1963	6.3	3.0	9.3	5.6	69.9	11.8	3.4	5,174.9
1964	6.1	3.3	9.4	6.6	67.1	13.4	3.5	5,819.5
1965	5.9	3.6	9.5	7.1	63.9	15.1	4.4	6,600.1
1966	5.2	4.1	9.3	7.6	61.8	16.8	4.5	7,250.3
1967	4.6	4.4	9.0	8.0	59.0	18.8	5.2	8,068.4
1968	4.2	4.4	8.6	8.1	55.9	21.8	5.6	8,972.4
1969	4.4	4.2	8.6	8.0	52.8	24.3	6.3	10,003.4
1970	4.7	4.5	9.2	7.7	52.2	24.3	6.6	11,059.1

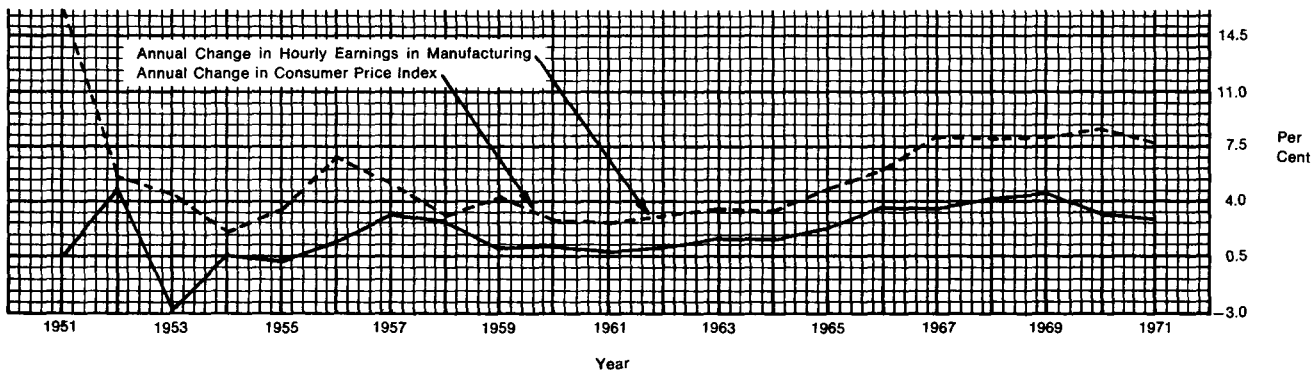
¹ Does not include mutual funds.

Source: Statistics Canada, *Trusted Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

Figure 5-1

SELECTED FINANCIAL AND ECONOMIC SERIES
YEAR-ENDS, 1951-1971





Notes:

1. The bond and mortgage yield series are defined in the *Bank of Canada Review*, May 1972, p. S131.

Sources:

For the Toronto Stock Exchange Industrial Index: *The Toronto Stock Exchange Indices Historical Record*, 5th ed. (Toronto: The Toronto Stock Exchange, December 31, 1970) plus *The Toronto Stock Exchange Review* (a monthly publication of the Exchange).

For bond prices: *The Bank of Canada Statistical Summary*, various issues, and the *Bank of Canada Review*, May 1972.

For the Consumer Price Index and Average Hourly Earnings in Manufacturing: Statistics Canada, *Annual Supplement to the Canadian Statistical Review* (Cat. No. 11-206), various issues, and the *Canadian Statistical Review* (Cat. No. 11-003), May 1972.

For mortgage and bond yields: The Bank of Canada, *Selected Canadian Bond Yield Averages and Other Interest Rates* (Ottawa: The Bank of Canada, Department of Banking and Financial Analysis, mimeo., 1971), plus the *Bank of Canada Review*, May 1972.

break loose" in the pension fund investment community about that time.¹⁰ On the one hand, bond prices, which up to that time had remained very steady, began to plummet. Not all sponsors could be defused by being told that book values were not affected. On the other hand, with rapidly increasing wages, and the fact that pension benefits are tied to current earnings (or, what is even worse, to final earnings) in many plans, plan sponsors' pension liabilities appeared headed into orbit. Many fund managers, who already had been experiencing the not-so-gentle pressure of fund sponsors to invest an increasing amount in common stocks, were undoubtedly subjected to even more pressure. And given the conventional wisdom that common stocks provide a hedge against inflation, it is hardly surprising that, in the late 1960s, an even greater proportion of fund inflows was invested in common stocks.

In the light of these developments, the fact that the proportion of total assets invested in mortgages remained relatively constant, around 9 percent, may seem paradoxical. No clear-cut explanation comes to mind. One possibility which seems reasonable, however, in the light of the unsettled conditions of the later 1960s, is that mortgages provided something of an uncomfortable compromise between bonds and common stocks. Throughout the period in question, mortgages provided higher yields than most bonds. In addition, the amortization feature meant that the loan principal was repaid more quickly on average than in the case of long-term bonds. Therefore, if interest rates did in fact increase after the loan was made, the principal amount affected would be less for a given amount invested in mortgages versus bonds. Assuming that the likelihood of default was no greater for mortgages than for bonds, mortgages would be the better investment given their higher yields. The differentials may well have been enough to satisfy those managers who were unwilling to commit these funds to common stocks.

Up to this point, we have discussed the trends in portfolio composition observed for the aggregation of all trustee pension funds. As one might well expect, there are marked differences from one group of funds to another. For example, when the five major "type of sponsoring organization" categories used by Statistics Canada are examined (*Table 5-2*), significant differences appear in the proportions invested in mortgages. At the one extreme, educational funds had only 1.5 percent of their assets invested in mortgages in 1970. At the other, federal trustee pension funds had 29.2 percent in mortgages. Moreover, there were marked differences in the extent to which the proportion of assets invested in mortgages changed over time. Provincial funds moved from zero mortgages in 1957 to 8.1 percent of assets in 1970.¹¹

¹⁰ The financial press abounds with articles and commentaries on the problems created for investment portfolio managers by the inflation of this period. The four articles listed below indicate the extent of the financial community's concern. All are contained in the *Financial Analysts Journal*. Stephen B. Packer, "Higher Interest Rates Forever?", Vol. 24, No. 1 (January-February 1968), pp. 84-90; Henry Kaufman, "Causes and Consequences of the New Financial Setting", Vol. 24, No. 2 (March-April 1968), pp. 19-21; Sidney Homer, "Inflation and the Capital Markets", Vol. 25, No. 4 (July-August 1969), pp. 143-45; Robert E. Innocenti, "The Stock-Bond Split Decision for Pension Funds", Vol. 25, No. 6 (November-December 1969), pp. 97-101.

¹¹ Probably very little weight should be given to this observation, however, from the point of view of trend formation. In 1969, the bulk of this group's mortgage investments was held by one fund which replied to the Project Team's April 1971 survey. The survey is described in greater detail in Section III.

Table 5-2

PERCENTAGE DISTRIBUTION AND SIZE OF PORTFOLIO HOLDINGS, CANADIAN TRUSTEED PENSION FUNDS,
BY MAJOR EMPLOYER CATEGORIES, 1957, 1963, 1969, AND 1970

(Book Values)

Type of Employer	Mortgages			Pooled and Mutual Funds	Bonds		All Stocks	Total Assets (\$ Millions)
	NHA	Other	All		Govt. of Canada	All		
<i>Municipal</i>								
1957	1.7	0.9	2.6	0.1 ¹	7.2	82.5	3.3	155.5
1963	2.7	1.3	4.0	0.8	5.3	88.6	3.2	398.2
1969	1.5	2.2	3.7	2.6	2.2	85.2	4.7	953.1
1970	1.6	3.6	5.2	3.1	1.6	83.4	4.4	1,171.1
<i>Provincial</i>								
1957	0.0	0.0	0.0	0.0 ¹	15.4	95.1	0.2	273.5
1963	0.9	2.0	2.9	0.1	15.1	91.8	3.1	423.4
1969	2.1	2.1	4.2	0.5	8.7	83.9	8.7	831.3
1970	3.3	4.8	8.1	0.5	5.8	75.8	11.4	1,012.2
<i>Federal</i>								
1957	22.6	0.1	22.7	0.0 ¹	35.4	72.3	3.1	373.1
1963	28.6	0.2	28.8	7.6	29.5	56.6	4.8	631.6
1969	19.3	8.1	27.4	3.0	14.8	38.2	26.0	1,115.8
1970	20.0	9.2	29.2	2.8	12.9	37.8	25.3	1,184.9
<i>Educational</i>								
1957	0.5	0.0	0.5	0.1 ¹	3.7	88.6	0.2	260.2
1963	0.3	0.2	0.5	0.5	3.1	96.5	0.2	516.0
1969	0.9	0.2	1.1	2.6	1.4	81.8	3.0	1,144.7
1970	1.2	0.3	1.5	2.6	1.0	80.6	3.4	1,318.2
<i>Industrial</i>								
1957	3.0	5.1	8.1	1.8 ¹	18.2	74.5	11.2	1,696.3
1963	4.0	4.6	8.6	7.1	9.1	62.9	17.5	3,077.6
1969	3.1	5.0	8.1	11.9	3.8	40.2	33.4	5,615.2
1970	3.4	4.7	8.1	11.7	3.4	39.0	34.3	5,986.2

¹ Does not include mutual funds.Source: Statistics Canada, *Trusteed Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

Federal funds increased their holdings of non-insured mortgages dramatically. While the absolute value of their holdings of NHA mortgages increased slightly between 1963 and 1970, they represented only 20.0 percent of total assets in 1970 as compared to 28.6 percent in 1963. Coincidentally, holdings of non-insured mortgages increased from 0.2 percent of total assets in 1963 to 9.2 percent in 1970. The overall result of these two opposing trends is that mortgages still represented roughly the same proportion of federal funds' total assets in 1970 (29.2 percent) as they did in 1963 (28.8 percent).

Over the time period examined, there was very little change in the emphasis given to mortgages by municipal, educational, and industrial funds. In addition, with the possible exception of the municipal group, none changed the mix of NHA and non-NHA mortgages significantly.

Summarizing our examination of historical trends with respect to mortgage holdings, there appear to have been only two changes of any consequence: the increase in mortgage holdings by provincial funds, and the shift from NHA to non-NHA mortgages by federal funds.

A more dramatic pattern appears with respect to other investment categories. All five of the fund groupings reduced their proportionate holdings of Government of Canada bonds, while increasing their proportionate holdings of stocks. Roughly speaking, the decrease in Government of Canada bonds equaled the increase in stocks. The changes were least pronounced for municipal, provincial, and educational funds — a reflection of the extent to which the assets of these funds have been concentrated throughout the entire period in municipal and provincial bonds. This suggests, but by no means proves, that investment discretion for these funds appears to be limited to a rather small proportion of the total funds available for investment.

Most groups, and the industry group in particular, increased their proportionate holdings of pooled pension and mutual funds. Undoubtedly, this trend is attributable to the introduction of many new and relatively small funds since the bulk of these assets is held by funds with total assets of under \$5 million.¹²

2. Factors Affecting the Choice of Portfolio Assets

Although these historical developments contain many implications for Canadian capital markets, we will restrict our analysis to their implications for the extent to which trustee pension funds might acquire mortgages for their portfolios in the future. To provide a framework for our analysis, we will first identify and discuss briefly the major portfolio characteristics which must be considered in arriving at portfolio investment decisions. These characteristics are (1) the portfolio's expected rate of return, (2) overall portfolio risk, and (3) portfolio realizability.

A discussion of why a portfolio manager should be concerned with the rate of return which a potential investment might provide would surely tax the patience of anyone who has been interested enough to reach this point.

¹² At the end of 1970, funds with total assets of under \$5 million accounted for \$556.9 million or 69.8 percent of the \$797.6 million investment in pooled pension funds, and for \$16.8 million or 30.6 percent of the \$55.0 million investment in mutual funds by trustee pension funds. (Statistics Canada, *op. cit.*, Table 13.)

The expected rate of return does warrant a comment, however, insofar as its level is associated with the riskiness of the fund portfolio. Ignoring for the moment the difficulty of defining risk, a basic premise underlying virtually all prescriptions concerning the choice of investments and the construction of portfolios is that investors expect to receive, on the average, a higher rate of return as the level of risk associated with the investment increases.¹³ Given reasonably efficient capital markets, this statement can be construed to imply that the higher the rate of return expected by the fund manager, the higher is the level of risk to which he is exposing the fund. Put in this way, it becomes apparent that the level of risk the manager is willing to accept places an upper limit on the expected rate of return, which in turn defines the sub-set of securities which are candidates for the fund portfolio.

What are the major risks facing the typical pension fund investment manager? Judging from the literature on pension fund management problems, the primary risk is the possibility that the capital value of the fund will be permanently impaired. We stress the word *permanently* because the fund sponsors, if not the manager, can typically take a very long-term view of the horizon over which the fund's obligations can be discharged from the contributed capital plus earnings generated by the fund's assets. Unfortunately, the notion is difficult to define operationally: whether or not a change in the value of a particular asset has resulted in permanent impairment of capital values can be a matter of opinion. For example, one would have been on dangerous ground to argue in December 1971 that the drop in the Dow-Jones Industrial Stock Average from 950 to 798 between April and November 1971 did not reflect a permanent drop in the value of the stocks comprising that index. The same person would probably feel less uncomfortable (but would not necessarily be any more correct) in arguing in June 1972 that the drop in the price of Government of Canada 4½ percent 1983 bonds from \$87 to \$80 between January and May 1972 did not represent a permanent impairment of capital value.

The notion of risk introduced above is undeniably "fuzzy". As such, it is difficult to discuss effectively. We have circumvented this difficulty by introducing a definition which will inevitably appear arbitrary and unreal to some. For present purposes, we will introduce — in lieu of the term *risk* — the term *capital certainty*, which is defined as the "predictability with which [an asset's] expected market value at future dates is anticipated".¹⁴ It is to this

¹³ This is by no means a new idea. In 1830, J. R. McCulloch stated:

"There are comparatively few species of security to be obtained in which there is no risk, either as to the repayment of the loans themselves, or the regular payment of the interest. . . . Other things being equal, the rate of interest must of course vary according to the supposed risk incurred by the lender of either not recovering payment at all, or not receiving it at the stipulated term. No person of sound mind would lend on the personal security of an individual of doubtful character and solvency, and on mortgage over a valuable estate, at the same rate of interest. Wherever there is risk, it must be compensated to the lender by a higher premium of interest."

The quotation is from his book *The Principles of Political Economy: With a Sketch of the Rise and Progress of the Science*, 2nd. ed. (Edinburgh, London and Dublin: 1830), pp. 508-9, as cited in Lawrence Fisher, "Determinants of Risk Premiums on Corporate Bonds", *Journal of Political Economy*, Vol. 67, No. 3 (June 1959), p. 221.

¹⁴ Basil J. Moore, *An Introduction to the Theory of Finance* (New York: The Free Press, 1968), p. 13.

aspect that we will refer when we comment below on the implications of current "risk" levels of funds for future levels of investment in mortgages.

We have identified portfolio realizability as a third characteristic of the portfolio which must be considered in arriving at investment decisions. Once again, we introduce a definition which may appear arbitrary to some. "The realizability of an asset may be defined as the proportion of its value that can be realized in cash after some (arbitrary) short period of time — e.g., one week."¹⁵ We have purposely identified this concept and not the more commonly used concept of liquidity, since the latter also embraces other characteristics of an asset which, in our view, are inconsequential for the bulk of pension fund managers.¹⁶ One might also seriously question (as we do at a later point) whether realizability is, in fact, a characteristic which should be valued by pension fund managers. As we shall document later, our research shows that fund inflows and outflows are typically fairly predictable. Consequently, the need to be able to convert assets into cash quickly seems minimal. Moreover, even in the unlikely event that a fund decides to change its investment strategy dramatically (for example, to sell its entire holdings of a particular type of asset), an accompanying need to effect the change quickly seems most remote.

Armed with the above definitions, we are now in a position to assess, at least qualitatively, the effect of the historical developments described earlier on the three major considerations involved in the selection of portfolio components.

Almost certainly, the expected rate of return on the bulk of fund portfolios is higher now than in earlier years. The primary reason for this is the shift from Government of Canada bonds to common stocks. A secondary reason is the increased preference for non-NHA over NHA mortgages.

We conclude that the marked shift from bonds to common stocks has reduced the capital certainty of pension fund portfolios. Our reasoning for what might be considered by many to be an obvious conclusion is as follows. First, the capital certainty of a well-diversified stock portfolio is primarily a function of the extent to which changes in its value mirror changes in the value of a broad index of common stocks. For pension fund common stock portfolios taken as a group, the correspondence is likely to be one to one, roughly speaking. On the other hand, the capital certainty of a bond portfolio is primarily a function of two variables: (1) the volatility of interest rates generally, and (2) the portfolio's maturity composition. Typically, the longer the term to maturity of the bonds held, the larger will be the change in price resulting from a given change in interest rates. A rough examination of recent year-to-year changes in stock market indices and long-term bond prices indicates that the former display the larger percentage changes; hence our conclusion that the shift to common stocks has reduced capital certainty.

Turning to the impact of historical developments on portfolio realizability, we first note that the realizability of an asset is a function of both the commission which must be paid to convert it into cash and the bid-ask spread. For some assets, notably common stock listed on major exchanges

¹⁵ *Ibid.*, pp. 13-14.

¹⁶ For a full discussion of the ambiguity of the term *liquidity*, see *ibid.*, pp. 12-14.

and traded in large volume, the commission is the primary factor. For other assets, such as bonds, the bid-ask spread is the major consideration. It is also probable that the size of the bid-ask spread and/or commission for an asset is a function of the quantity which the investor wishes to buy or sell in a time period of specified length relative to the amount usually exchanged in a period of that length.¹⁷ On balance, it would seem that the shift from bonds to stocks has increased portfolio realizability, particularly when we consider the volume of secondary market trading in bonds relative to stocks, the fact that the larger funds can obtain the commission rates applicable to high-volume stock transactions, and the not inconsiderable proportion of some stock portfolios invested in foreign (presumably largely U.S.) common stocks.¹⁸

3. *Implications of Historical Developments for Future Investment Interest in Mortgages*

In recent years, the primary investment policy of unconstrained trustee pension funds appears to have been directed toward increasing the expected rate of return. This policy has reduced portfolio capital certainty and increased portfolio realizability. Since adequate portfolio realizability can be achieved by investing appropriate amounts in selected common stocks, the only economic reason for holding bonds is the maintenance of some level of capital certainty. To a large extent, the capital certainty available from bonds can also be obtained from insured mortgages having varying, but certain, maturities.¹⁹ And since mortgages typically provide higher yields, there appear to be good reasons for many funds to shift from bonds to mortgages.²⁰ Of course, after a particular level of capital certainty is achieved through mortgages, it is appropriate, on *both* expected return and realizability grounds, to shift to stocks.

¹⁷ For a rigorous development of this point as it applies to bid-ask spreads, see H. Demsetz, "The Cost of Transacting", *Quarterly Journal of Economics*, Vol. 82, No. 1 (February 1968), pp. 33-53.

¹⁸ At the end of 1970, foreign common stocks represented 7.7 percent and 6.9 percent of the market value of assets of federal and industry groups respectively. (Statistics Canada, *op. cit.*, Table 10.) As Table 5-2 indicates, these groups held the highest proportions of both stocks and mortgages.

¹⁹ It is appropriate to note, however, that the NHA insurance feature covers only principal and interest earned prior to foreclosure. It does not guarantee the contracted rate of interest to the investor for the original life of the mortgage. The investor must, therefore, bear the risk of having to reinvest the recovered principal sum at a lower rate. This problem is a sub-set of the more general one of maximizing the long-term yield on a portfolio which is subject to periodic cash inflows. The problem is greater, the faster the rate at which the principal sum originally invested is repaid.

MacAuley's concept of duration appears relevant here. For a discussion of this concept as it applies to controlling portfolio yields, see L. Fisher and R. Weil, "Coping with the Risk of Interest-Rate Fluctuations: Returns to Bondholders from Naive and Optimal Strategies", *The Journal of Business*, Vol. 44, No. 4 (October 1971), pp. 408-31.

²⁰ Evidence that a shift to mortgages is under way is contained in the Project Team's April 1971 survey. In response to question no. 4, "Do you expect to change the proportion of your assets held in the forms listed below by what you consider to be a significant amount?", the replies were as follows: Number expecting to *increase* the proportion in insured residential mortgages, non-insured mortgages, and bonds: 13, 13, and zero respectively; number expecting to *decrease* the proportion in the above assets: zero, one, and 17 for the insured mortgages, non-insured mortgages, and bonds respectively. Full details of the replies to this question are given in Appendix C.

One cannot write this prescription for all funds, particularly the provincial, municipal, and educational funds, whose investments are concentrated in bonds. Should these funds decide to reduce this concentration, it would be appropriate for them to shift into stocks rather than mortgages. Since they will have a high degree of capital certainty as long as their portfolios are primarily in bonds, they should shift into the asset having the highest expected rate of return.

4. Further Clues to Future Trusteed Pension Fund Interest in Mortgages: the U.S. Experience

There are both major similarities and differences between United States and Canadian trusteed pension fund investment practices and the financial environments in which they operate. While the differences must certainly be borne in mind when attempting to assess the extent to which Canadian trusteed pension funds might emulate their U.S. counterparts, the U.S. experience seems worth examining briefly, given the traditional lead-lag relationship that holds for so many economic activities undertaken in both countries. At this juncture, we examine only historical developments in the portfolio composition of U.S. funds. We touch briefly on their trading practices in Section IV.

Although there are three major types of U.S. pension funds outside the OASDI system (Old Age Survivors and Disability Insurance), we will examine the investment practices of one type only—trusteed or non-insured plans. We have ignored the insured plan group sponsored by life insurance companies because the bulk of their assets is commingled with assets related to life insurance policies. We have also ignored the plans sponsored by federal, state, and local government agencies. The bulk of these plans appears to have investment features or constraints which make their experience irrelevant to the Canadian scene.

Throughout their existence, U.S. trusteed pension funds have invested only a small proportion of their assets in mortgages. The highest proportion represented by mortgages in recent years was 5.9 percent in 1966. Moreover, a downward trend appears to have developed recently. The proportion fell in both 1967 and 1968 to 5.5 percent and 4.8 percent respectively (*Table 5-3*).

The major development in the U.S. pattern has been the dramatic reduction in the relative importance of bonds and the corresponding increase in the proportion invested in common stocks. Between 1960 and 1968, the percentage of total assets invested in bonds fell from 55.5 percent to 35.8 percent. Over the same period, the percentage in stocks rose from 32.4 percent to 50.1 percent.

5. Canadian and U.S. Comparisons

The major similarity in the investment patterns of U.S. and Canadian trusteed pension funds is the increasing emphasis given to common stocks. Almost certainly this has resulted from pressures on pension fund managers in both countries to increase investment rate of return.

The major differences are in the proportion invested in mortgages. Be-

tween 1960 and 1968, Canadian funds sponsored by non-government organizations averaged 8.2 percent of their assets in mortgages, while U.S. funds averaged only 5.0 percent (*Tables 5-1 and 5-3*).

There are two primary explanations for this difference. First, the yield spreads between mortgages and bonds have been much larger, on average, in Canada over the last decade.²¹ Second, the investment orientation of the trustees probably differs in the two countries. In Canada, trust companies have been the major source of outside counsel to trustee funds. In the U.S., commercial banks have been the major source. As is well known, mortgages play a more important role in the activities of trust companies. Consequently, it seems reasonable for the portfolios over which they have some degree of control to mirror this difference.

Table 5-3
DISTRIBUTION OF ASSETS OF
U.S. PRIVATE AND NON-INSURED PENSION FUNDS, 1960-1968
(Based on Book Values)

<i>Year</i>	<i>Common Stocks</i>	<i>Bonds</i>	<i>Mortgages</i>	<i>All Other</i>	<i>Total</i>	<i>Total Assets (\$ Billions)</i>
1960	32.4%	55.5%	3.9%	8.2%	100.0%	33.1
1961	35.6	52.2	4.2	8.0	100.0	37.5
1962	37.5	50.2	4.5	7.8	100.0	41.9
1963	38.9	48.6	4.8	7.7	100.0	46.6
1964	40.1	46.8	5.3	7.8	100.0	51.9
1965	42.1	44.4	5.7	7.8	100.0	58.1
1966	44.0	42.2	5.9	7.9	100.0	64.5
1967	47.1	38.7	5.5	8.7	100.0	71.8
1968	50.1	35.8	4.8	9.3	100.0	80.5

Source: U.S. Securities and Exchange Commission, *Statistical Bulletin*, June 1969.

Our examination of U.S. portfolios suggests two major considerations bearing on the extent to which Canadian trustee pension funds are likely to invest in mortgages. First, it is likely that common stocks will form an increasing proportion of Canadian fund assets for some time to come. This will probably be accomplished at the expense of bonds. Second, the U.S. experience provides no indication of the proportion which Canadian funds might ultimately invest in mortgages (assuming Canadian funds decide to increase it) since the Canadian proportion has historically been above the U.S. proportion. At the same time, however, the U.S. experience cautions against expecting dramatic increases in a changed Canadian institutional setting, to the extent that the new setting would simply parallel the U.S. setting.

II. THE STOCK-FLOW ADJUSTMENT MODEL

Much of the recent work on the mortgage investment behavior of Canadian financial intermediaries has been organized around stock-flow adjust-

²¹ For an indication of Canadian yield spreads, see *Figure 5-1*. Data on U.S. yield spreads are contained in Andrew F. Brimmer, "Interest Rate Discrimination, Savings Flows, and New Priorities in Home Financing" (Washington: Board of Governors of the Federal Reserve System, June 9, 1972, mimeo.), esp. Chart II.

ment models.²² These models are based on the premise that a financial institution wishes to invest particular "target" proportions of its portfolio in the various assets available to it. Presumably, the target proportions are those which, once achieved, would provide the fund with the best overall combination of expected rate of return, capital certainty, and realizability.²³

On the assumption that the actual proportion for a particular asset at any point in time differs from the target, the model specifies the rate at which the target is approached as a function of several factors. The rate is presumed to be higher, the greater the attractiveness of the asset's expected yield in the current period. Attractiveness is determined by comparing the differences between the current expected yield on the subject asset and other assets to some notional long-run normal expected differences. The rate is also presumed to be higher, (1) the larger the institution's gross inflow of funds, (2) the larger the difference between its target and actual proportions, and (3) the lower the costs associated with the transactions involved.²⁴

III. MORTGAGE INVESTMENT TARGETS AND POSSIBLE IMPACT OF A RESIDENTIAL MORTGAGE MARKET CORPORATION

1. *The Target Proportion*

a) Assumptions

An obvious prerequisite to evaluating the possible impact of an RMMC on the level of investment in mortgages is information on the activities that it might undertake. Since research on this topic was being undertaken at the same time as this paper was being prepared, a precise statement of its possible activities was unobtainable. The following statements made publicly by Professor J. V. Poapst, Research Director for the Project Team on New Financing Mechanisms and Institutions, were taken as the best indication available of an RMMC's likely activities.

"A central mortgage bank (or fund) would activate and enlarge the authority of a type that CMHC already has to function as lender of last resort, and to buy and sell NHA mortgages.

The more important function of the central mortgage bank would be to help promote a secondary market in mortgages. It would post offers to buy at competitive prices so that lenders and investors in mortgages could conduct their operations in the knowledge that there is a place where sizable holdings of mortgages could be disposed of should a change in their

²² The major contributor has been Lawrence B. Smith. In particular, see his *Housing and Mortgage Markets in Canada*, No. 6 in the Bank of Canada Staff Research Series (Ottawa: The Bank of Canada, 1970) and the references cited therein.

²³ As should be apparent from our earlier discussion, one cannot have "the best of all worlds" with respect to each of these items. Trade-offs are involved. Rigorous development of the trade-off mechanism has been the focal point of much of the academic work in finance in recent years. The interested reader is referred to G. A. Pogue, "An Extension of the Markowitz Portfolio Selection Model to Include Variable Transactions Costs, Short Sales, Leverage Policies and Taxes", *The Journal of Finance*, Vol. 25, No. 5 (December 1970), 1005-27, and the references cited therein.

²⁴ This verbal description of the adjustment mechanism is adapted from Lawrence B. Smith, "Financial Intermediary Lending Behavior in the Postwar Canadian Mortgage Market", *The Quarterly Journal of Economics*, Vol. LXXXI, No. 3 (August 1967), pp. 499-500. This article also contains a detailed discussion of the rationale for incorporating each of the identified factors.

portfolio strategy call for it. Thus if five years after the date of investment the portfolio manager concluded that a shift away from mortgages would be appropriate he could make a shift without undue effort, delay and cost. Similarly the central mortgage bank would stand ready to sell mortgages at competitive prices. This would permit investors who have concluded that their appropriate portfolio strategy would be to build up their mortgage holdings rapidly to do so in an orderly way. Enhancing the investor's ability to both buy and sell encourages greater investment in mortgages.

Another function of a central mortgage bank would be to make the supply of funds for housebuilding more elastic, more responsive to the quantity of funds sought by borrowers at prevailing terms."²⁵

In view of these possible activities, we have taken the following approach in assessing their possible impact. First, we have assumed that a group of funds exists which would not change the proportion of their portfolios invested in mortgages simply because an RMMC exists. While they may indeed utilize the Corporation's services if it is ultimately established, the overall contribution of its facilities will be infinitesimal to these funds, simply because its services are largely redundant to them. Second, we have assumed that a second group of funds would very much like to change the proportion of portfolios invested in mortgages. We assume that they have not done so because existing market facilities are not conducive to this course of action. We further assume, however, that they would emulate the first group with respect to the proportion invested in mortgages if an RMMC existed. Finally, there is a third group of funds which, like the first group, will not change the proportion invested in mortgages. Unlike the first group, we assume that the third group will not do so because of constraints on their investment policy which rule out significant investment in mortgages. In particular, we have in mind those funds which are constrained—either implicitly or explicitly—to invest the bulk of their funds in the securities of the sponsoring organization.

b) Estimating the Target Proportion

We turn now to an examination of the portfolios of those funds comprising our first group—that is, those funds assumed able to build portfolios containing an optimal proportion of mortgages despite the non-existence of an RMMC. Before examining the data, it is important to note that their present portfolios were built on the basis of yield spreads which, if reduced by the activities of an RMMC, would result, all other things being equal, in mortgages being relatively less attractive than competing media. For present purposes, we ignore this potentially important complication.

In our view, those pension funds least likely to need the facilities of an RMMC to build optimal portfolios are the largest funds, the funds of trust company and bank employees, and funds which buy units in trust company pooled funds or insurance company segregated funds. The first and second groups should come closer to being able to achieve any economies of scale which exist in the initiation and servicing of mortgages and in the construc-

²⁵ J. V. Poapst, "R & D in the Mortgage Market", Notes for remarks made to the Second Conference on Mortgage Investments for Trusteed Pension Plans, Government Conference Centre, Ottawa, December 8, 1970, pp. 9-10.

tion of well-diversified mortgage portfolios. Although funds which acquire units in pooled or segregated funds are concentrated at the bottom end of the size spectrum, their flexibility in utilizing mortgages as investments derives from the fact that they can buy as few or as many units as they wish in separate bond, mortgage, or equity funds with roughly the same acquisition and management fee applicable to all types. In effect, they do not now have a preference for one type over another because of cost differentials.

Two sets of data were examined. Aggregate data were obtained from Statistics Canada Catalogue No. 74-201. Data for individual funds were obtained from the Project Team's Survey of Trusteed Pension Funds, April 1971. Aggregate data were used in analyzing the portfolio composition of large funds and of pooled and segregated funds. For reasons to be discussed later, the data for individual funds were also used in analyzing the portfolio composition of large funds and those established for the employees of trust companies and banks.

All data present problems. In the case of the aggregate data, there are three. First, the largest size category is \$25 million and over. We would have preferred a higher break point, since it is frequently said in investment circles that a portfolio must be over \$50 million in value before all economies of scale can be exploited. Second, this category contains the bulk of the assets of provincial, municipal, and educational funds—most of which have their assets concentrated in provincial or municipal bonds. Since our purpose is to analyze the investment behavior of relatively unconstrained funds, we have subtracted what we think is a plausible estimate of the assets of these funds in the \$25 million and over category.²⁶ In effect, we have defined this category as “non-provincial, non-municipal, and non-educational funds with assets of \$25 million and over”.

The third problem relates to the fact that the source document gives the aggregate proportion invested in each medium. Because of this, it is possible, for example, for one very large fund heavily invested in mortgages to give a distorted indication of the proportion typically invested in mortgages. Fortunately, we are able to check on this possibility, at least roughly, using the data on individual funds obtained through the Project Team's survey.

Turning now to the aggregate data, *Table 5-4* shows the distribution of assets (at book values) for our special sub-set of funds with assets of \$25 million and over for the years 1967, 1968, and 1969. The proportion invested in mortgages varies little from year to year, although there appears to be a slight shift from NHA to non-NHA mortgages. In any event, the stability of the overall proportion suggests that these funds, in aggregate, view 14 percent as an equilibrium level.

Relative to our sub-set of large funds, both the pooled and segregated funds had a higher proportion of their portfolios invested in mortgages

²⁶ On the basis of the distributions of municipal and provincial bonds among the various “type of sponsoring organization” categories and size of fund categories, we concluded that approximately 85 percent of the assets of provincial, municipal, and educational funds were counted in the \$25 million and over size category. In making our adjustments, we also assumed that the composition of the provincial, municipal, and educational funds was invariant with respect to size of fund.

through the period examined (*Tables 5-5 and 5-6*). Based on book values at year-end 1970, the percentages were 31.9 and 21.6 for pooled and segregated funds respectively. For some time, however, the trend has been steadily downward for both types—an indication that the 1970 proportions may not be equilibrium levels. In view of the stability of the proportion observed for the \$25 million and over class, it seems very unlikely that the pooled and segregated funds would fall below 14 percent. It seems reasonable, therefore, to view the lower of the two proportions (that is, the segregated funds' 21.6 percent) as an upper limit estimate of the equilibrium proportion.

The data obtained for individual funds via the Project Team's survey serve two purposes: (1) they provide a cross-check on the equilibrium proportion estimated from aggregate data for large funds, and (2) they enable us to estimate the proportions held by the funds of trust company and bank employees.

Although the bulk of the results of the Project Team's survey will not be disclosed in detail until later, the sample selection method for the survey and the response pattern warrant a brief comment at this point. The survey questionnaire was sent to certain individuals who attended the Second Con-

Table 5-4

ESTIMATED DISTRIBUTION OF ASSETS:
FUNDS WITH TOTAL ASSETS \$25 MILLION AND OVER,
EXCLUDING ESTIMATED ASSETS OF PROVINCIAL, MUNICIPAL, AND
EDUCATIONAL FUNDS, 1967-1969

(Book Values, \$ Millions)

		1967		1968		1969	
		\$	%	\$	%	\$	%
Investment in Pooled Pension Funds		55.6	1.5	60.2	1.5	60.9	1.4
Investment in Mutual Funds		23.6	0.7	21.5	0.5	19.7	0.4
Bonds							
	Government of Canada	301.8	8.4	301.9	7.6	304.5	6.8
	Provincial Government	821.6	22.8	823.8	20.7	836.8	18.8
	Municipal, School Boards, etc.	219.7	6.1	206.3	5.2	221.4	5.0
	Other Canadian	615.6	17.1	658.1	16.5	700.9	15.8
	Non-Canadian	4.4	0.1	3.9	0.1	6.1	0.1
Total		1,963.1	54.5	1,994.0	50.1	2,069.7	46.5
Stocks							
	Canadian, common	663.0	18.4	824.9	20.7	1,009.1	22.7
	Canadian, preferred	25.8	0.7	30.1	0.8	33.2	0.7
	Non-Canadian, common	223.9	6.2	321.6	8.1	415.4	9.3
	Non-Canadian, preferred	2.2	0.1	5.1	0.1	3.7	0.1
Total		914.9	25.4	1,181.7	29.7	1,461.4	32.8
Mortgages							
	Insured Residential (NHA)	298.2	8.3	314.1	7.9	357.5	8.0
	Conventional	205.0	5.7	234.1	5.9	259.0	5.8
Total		503.2	14.0	548.2	13.8	616.5	13.8
Real Estate and Lease-backs		29.1	0.8	31.0	0.8	32.2	0.7
Miscellaneous		119.9	3.3	151.8	3.8	188.1	4.2
Total Assets		3,609.4	100.0	3,988.4	100.0	4,448.5	100.0

Source: Statistics Canada, *Trusteed Pension Plans Financial Statistics* (Cat. No. 74-201), various issues, with adjustments described in text.

Table 5-5

DISTRIBUTION OF ASSETS OF POOLED PENSION TRUST FUNDS, 1962-1970

Percent of Portfolio Held in

Year	Mortgages					Total Assets (\$ Millions)
	Bonds	Stocks	NHA	All Others	All	
Based on Book Values						
1962	46.9	27.4	11.5	11.4	22.9	191.9
1963	42.6	28.0	12.9	14.7	27.6	260.0
1964	38.5	26.3	12.6	20.9	33.5	349.8
1965	33.2	25.9	10.0	28.9	38.9	481.0
1966	29.5	27.3	8.2	31.9	40.1	594.4
1967	26.5	30.4	7.7	29.6	37.3	687.0
1968	23.3	35.4	6.6	29.3	35.9	772.5
1969	20.6	39.6	6.3	26.8	33.1	864.2
1970	18.7	43.5	5.5	26.4	31.9	888.2
Based on Market Values						
1962	na	na	na	na	na	na
1963	40.5	31.3	12.6	13.9	26.5	274.3
1964	35.8	31.5	11.9	19.2	31.1	379.7
1965	30.6	30.7	9.7	27.1	36.8	506.5
1966	27.4	30.6	8.0	30.9	38.9	596.1
1967	23.6	35.5	7.3	27.7	35.0	681.5
1968	19.5	43.8	5.6	25.8	31.4	789.5
1969	17.1	45.7	5.5	24.7	30.2	820.9
1970	17.1	47.1	4.9	24.7	29.6	853.5

na: not available.

Source: Statistics Canada, *Trusted Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

Table 5-6

DISTRIBUTION OF ASSETS IN SEGREGATED FUNDS
AS REPORTED BY INSURANCE COMPANIES, 1964-1970*Percent of Portfolio Held in*

Year	Bonds	Stocks	Mortgages			Total Assets (\$ Millions)
			NHA	All Others	All	
Based on Book Values						
1964	41.0	20.9	5.0	30.3	35.3	57.8
1965	37.0	25.9	3.2	29.0	32.2	93.8
1966	40.2	25.3	1.9	26.1	28.0	139.3
1967	34.9	30.4	1.3	29.6	30.9	193.7
1968	30.0	36.4	1.7	27.2	28.9	258.9
1969	23.9	44.2	2.2	20.4	22.6	400.5
1970	25.9	45.3	2.8	18.8	21.6	545.1
Based on Market Values						
1964	40.1	23.2	4.8	29.2	34.0	60.1
1965	36.2	27.5	3.2	28.7	31.9	93.8
1966	39.8	25.1	1.9	26.4	28.3	133.9
1967	33.0	33.3	1.2	28.7	29.9	189.7
1968	27.0	42.1	1.5	24.8	26.3	267.9
1969	22.3	45.7	2.1	20.2	22.3	387.0
1970	26.2	45.9	2.7	17.8	20.5	533.9

Source: Statistics Canada, *Trusted Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

ference on Mortgage Investments for Trusteed Pension Plans held in Ottawa on December 8, 1970. Forty-nine usable questionnaires were returned. This number represented approximately two-thirds of the individuals directly associated with a particular fund or funds. Statistics Canada was authorized by forty-three responses to provide the Project Team with the financial data submitted in response to the 1967, 1968, and 1969 D.B.S. surveys.²⁷ These funds accounted for 35.5 percent of assets (at market) and 48.5 percent of mortgages (at book) held by trusteed pension funds in 1969.²⁸ Moreover, respondent funds in the \$25 million and over total assets category accounted for 48.9 percent and 59.1 percent of that category's total assets and mortgages respectively (*Table 5-7*). It appears, therefore, that the respondent funds are larger and in some sense more mortgage conscious than average, and that they probably possess higher-than-average expertise in mortgage investment management. Finally, replies were received for five trust company employee funds and three chartered bank employee funds.²⁹

The mean percentage invested in mortgages at year-end 1969 by the ten largest respondent funds was 13.3 percent (*Table 5-8*). In view of the large proportion of total fund assets accounted for by these funds, it is hardly surprising, but nevertheless reassuring, that this figure is very close to that observed earlier from the aggregate data. When a major provincially sponsored fund is omitted, the percentage rises to 14.7 percent—a figure which is probably more indicative of the behavior of unconstrained funds.

Over the three-year period for which data are available, there has been a slight upward trend in the percentage invested in mortgages. This indicates that the 1960 figure may be below the target or equilibrium proportion.³⁰

Somewhat higher 1969 values are observed in *Table 5-8* for the funds of trust company and chartered bank employees. When the two funds in this category which overlap with the ten largest funds are excluded, the 1969 mean value is 18.4 percent. When the mean is based on all funds in the category, it becomes 17.6 percent.

In contrast to the ten largest funds, there has been a slight downward

²⁷ In addition to the forty-nine usable questionnaires, two were completed by individuals who represented organizations that did not sponsor employee pension plans directly. Their responses were not included in our analysis.

²⁸ These figures actually understate the proportion of total assets accounted for by the responding organizations. Three of these organizations sponsored two funds. In such cases, we utilized the data for the larger fund only. This procedure was followed to ensure that each organization was given equal weight in the analyses of the questionnaire responses which follow.

²⁹ Since one of the banks did not authorize the release of financial data, certain analyses relate to only two chartered bank employee funds.

³⁰ Further evidence in support of this possibility is provided by responses to question no. 4 of the Project Team's April 1971 survey. See our earlier discussion in footnote 20.

Table 5-7

**DISTRIBUTION OF SURVEYED FUNDS WHICH PROVIDED ALL FINANCIAL DATA
AND COMPARISONS WITH AGGREGATE DATA**
(All Dollar Values and All Aggregate Data Relate to Year-End 1969)

	Sample					Population				Sample/Population		
	No. of Funds	No. Holding Mortgages	Total Mortgages (\$ Millions, Book)	Total Assets (\$ Millions, Market)	Mortgages as Percent of Assets	No. of Funds	Total Mortgages (\$ Millions, Book)	Total Assets (\$ Millions, Market)	Mortgages as Percent of Assets	No. of Funds	Total Mortgages	Total Assets
<i>By Total Assets</i>												
(\$ Millions, at Market)												
Under 1.0	1	0	0.0	0.2	0.0	3,458	12.4	513.9	2.4	*	0.0	*
1.0 - 4.9	3	1	0.2	7.8	1.9	387	38.4	826.9	4.6	0.8	0.5	0.9
5.0 - 24.9	16	11	12.7	185.3	6.9	158	125.9	1,610.8	7.8	10.1	10.1	11.5
25.0 and over	23	21	405.5	3,129.4	13.0	69	686.6	6,398.5	10.7	33.3	59.1	48.9
Total	43	33	418.4	3,322.7	12.6	4,072	863.4	9,350.1	9.2	1.1	48.5	35.5
<i>By Type of Organization</i>												
Municipalities and Municipal Enterprises	3	3	11.0	136.4	8.1	75	35.4	856.6	4.1	4.0	31.1	15.9
Provincial Crown Corps. and Gov't Agencies	4	3	26.5	407.2	6.5	39	34.8	737.6	4.7	10.3	76.1	55.2
Federal Crown Corps. and Gov't Agencies	2	2	276.9	956.4	28.9	8	305.2	1,023.3	29.8	25.0	90.7	93.5
Educational	4	1	0.4	706.6	0.1	49	12.3	1,026.9	1.2	8.2	3.3	68.8
Industry: Non-Bank or Trust Co.	22	17	52.2	781.7	6.7	na	na	na	na	na	na	na
Industry: Bank or Trust Co.	8	7	51.5	334.5	15.4	na	na	na	na	na	na	na
All Industry	30	24	103.7	1,116.2	9.3	3,778	455.3	5,375.3	8.5	0.8	22.8	20.8
All Others	0	0	0	0	0	123	20.4	330.4	6.2	0.0	0.0	0.0
<i>By Value of Mortgages</i>												
(\$ Millions, at Book)												
None	10	0	0.0	768.4	0.0							
0.100 - 7.499	26	26	53.4	824.5	6.5							
7.500 and over	7	7	365.0	1,729.7	21.1							
<i>By Mortgages as Per Cent of Total Assets</i>												
0.0	10	0	0.0	768.4	0.0							
0.1 - 8.9	18	18	49.7	906.6	5.5							
9.0 and over	15	15	368.7	1,647.6	22.4							

*Less than 0.1 per cent. na: not available.

Source: CMHC Project Team's Survey of Trusteed Pension Funds, April 1971, and Statistics Canada, *Trusteed Pension Plans Financial Statistics, 1969* (Cat. No. 74-201).

Table 5-8

PERCENTAGE OF TOTAL ASSETS INVESTED IN MORTGAGES BY
SELECTED TRUSTEED PENSION FUNDS IN PROJECT TEAM SURVEY,
YEAR-END 1967-1969

	1967	1968	1969
<i>Ten Largest Funds (1969 Assets Above \$75 Million)</i>			
*Fund A	5.3	4.7	17.2
Fund B	28.8	27.9	27.3
*Fund C	14.3	15.1	13.9
Fund D	6.6	5.8	5.1
Fund E	4.4	5.0	9.5
Fund F	8.7	7.5	8.5
Fund G	7.3	9.6	10.1
Fund H	0.0	0.0	0.0
Fund I	33.2	34.1	36.9
Fund J	4.6	4.0	4.0
Mean — 10 funds	11.3	11.4	13.3
Mean — excluding Fund H	12.6	12.6	14.7
<i>Funds Covering Employees of Trust Companies and Banks¹</i>			
*Fund A	5.3	4.7	17.2
Fund K	34.2	36.6	23.4
*Fund C	14.3	15.1	13.9
Fund L	37.2	38.2	37.9
Fund M	31.3	6.9	5.2
Fund N	29.0	23.8	18.4
Fund O	1.5	5.4	7.1
Mean — 7 funds	21.8	18.7	17.6
Mean — 5 funds not common to both groups	26.6	22.2	18.4

¹ One trust company was not included since all of its assets were invested in pooled pension funds.

*Common to both groups.

Source: CMHC Project Team's Survey of Trusteeds Pension Funds, April 1971.

trend over the three-year period in the percentage invested in mortgages by the funds of trust companies and chartered bank employees. This divergence suggests that it might be reasonable to conclude that the "true" equilibrium level lies between the two 1969 observations; that is, one group is approaching it from a position of under-investment and the other from a position of over-investment in mortgages.

c) Estimated Value

On the basis of the above analysis, we conclude that a reasonable range for an equilibrium proportion in mortgages, given the existence of an RMMC, would be 17 percent to 20 percent of total assets. This range, however, would apply only to those funds which are not constrained to invest heavily in other assets. Judging from our earlier examination of the provincial, municipal, and educational funds, such constraints may affect funds holding a significant fraction of trustee pension fund assets.

2. The Rate at which the Target Proportion Might Be Approached

We now turn our attention to the rate at which a new equilibrium might be approached. Research by others has indicated that the two major variables

influencing the speed of adjustment are relative yields³¹ and the organization's cash flow.³² For present purposes, we will assume that relative yields remain constant³³ and will concentrate on the cash flow variable.

We need to consider two aspects of cash flow: its size, and the proportion which might reasonably be allocated to mortgages. Ideally, we would include cash from the sale or redemption of assets. Because of the lack of data on this item, our analysis is restricted to employee and employer contributions, investment income, employee withdrawals, pension payments, and administrative expenses.

To obtain some idea of the possible size of net cash inflows, we examined the Statistics Canada income and expenditure data for various fund categories over the period 1958-1970 (*Tables 5-9, 5-10, and 5-11*). With the exception of the periods immediately before and after the introduction of the Canada Pension Plan, most categories have experienced fairly steady year-to-year growth in net cash flows. We conclude, therefore, that the historical record provides a reasonable point of departure for our purposes.³⁴

To estimate the proportion which might be allocated to mortgages, it is necessary to become much more conjectural. We would like to know the extent to which funds would commit their cash flow to mortgages if they became "turned on" by the opportunities arising from the existence of an RMMC. The only other occasion on which funds became dramatically more enamored of a particular investment medium was when they shifted from bonds to stocks. As *Table 5-11* indicates, funds in the "industry" category—the category making the most dramatic shift—have devoted approximately 68 percent of their net cash flow (based on our definition) in 1968 and 1969 to the purchase of stocks. Since the shift from bonds to stocks was probably more dramatic than any shift that might be induced by the introduction of an RMMC, we conclude that the 68 percent figure for stocks is an upper limit estimate of the proportion that would be devoted to mortgages. That it is not an unreasonable estimate is suggested by the proportions which "Federal" category funds have allocated to mortgages on occasion: 68.4 percent in 1958 and 58.6 percent in 1970 (*Table 5-10*).

³¹ Of course, relative yields also affect the target proportion itself.

³² See, for example, Lawrence B. Smith, "Financial Intermediary Lending Behavior", pp. 493-514, esp. 507-9.

³³ In the absence of data on the extent to which the existence of an RMMC might reduce mortgage interest rates, we have no viable alternative. Nevertheless, we must express some trepidation in doing so, since recent research indicates that financial institutions having low liquidity requirements appear quite interest sensitive. See Lawrence B. Smith and Gordon R. Sparks, "The Interest Sensitivity of Canadian Mortgage Flows", *The Canadian Journal of Economics*, Vol. III, No. 3 (August 1970), pp. 407-21, esp. 413-15. In our view, trustee pension funds need little liquidity.

³⁴ At some future date, trustee pension funds will "mature", in the sense that cash outflows to, or on behalf of, members will exceed cash inflows. Since this is unlikely to occur for a number of years, extrapolation of the historical trend into the five-year period for which we make estimates (1972-1976) seems reasonable.

Table 5-9

SELECTED FINANCIAL DATA FOR TRUSTEED PENSION
FUNDS WITH ASSETS GREATER THAN \$5 MILLION, 1957-1970
(Book Values)

Net Cash Flows			Holdings at Year-End (\$ Millions)				Annual Changes in Holdings as Per Cent of Net Cash Flows			
Year	Millions	Year-to-Year \$ Percentage Change	Mortgages			All Stocks	Mortgages			All Stocks
			NHA	Other	All		NHA	Other	All	
Funds \$5.0 - 24.9 Million										
1957	—	—	15.1	9.6	24.8	51.8	—	—	—	—
1958	85.8	—	21.1	12.5	33.6	71.0	7.0	3.3	10.4	22.3
1959	88.7	3.4	19.7	15.8	35.4	59.0	-1.7	3.7	2.0	-13.5
1960	99.4	12.0	20.7	17.9	38.6	73.4	1.1	2.1	3.2	14.5
1961	98.0	-1.4	23.4	23.6	47.0	96.8	2.7	5.9	8.6	23.9
1962	121.7	24.3	30.0	33.3	63.3	123.0	5.4	8.0	13.4	21.5
1963	139.1	14.2	43.9	42.6	86.4	152.2	10.0	6.6	16.6	21.0
1964	165.0	18.7	50.1	50.6	100.7	195.7	3.8	4.9	8.6	26.4
1965	165.0	-0.0	54.4	70.9	125.3	240.3	2.6	12.3	14.9	27.0
1966	128.5	-22.1	41.1	75.7	116.8	282.2	-10.3	3.7	-6.6	32.6
1967	140.1	9.0	35.8	83.1	118.9	330.6	-3.8	5.3	1.5	34.6
1968	144.4	3.1	34.7	85.8	120.4	433.5	-0.8	1.8	1.0	71.2
1969	186.2	28.9	35.5	90.5	125.9	546.8	0.4	2.5	3.0	60.9
1970	211.5	13.6	41.3	94.2	135.5	629.5	2.7	1.7	4.5	39.1
Funds \$25.0 Million and Over										
1957	—	—	78.2	55.2	133.4	62.8	—	—	—	—
1958	188.1	—	113.1	60.3	173.4	113.4	18.5	2.7	21.3	27.0
1959	194.2	3.2	155.4	64.6	219.9	135.0	21.6	2.2	23.9	11.2
1960	205.8	6.0	169.8	64.6	234.4	138.6	7.0	0.0	7.0	1.8
1961	240.0	16.6	198.0	65.5	263.6	208.5	11.8	0.4	12.2	29.1
1962	274.7	14.5	235.0	82.3	317.4	287.2	13.5	6.1	19.6	28.7
1963	314.1	14.4	271.6	91.5	363.1	358.0	11.7	2.9	14.6	22.5
1964	335.3	6.7	290.6	115.0	405.6	454.4	5.6	7.0	12.7	28.7
1965	383.2	14.3	320.6	132.1	452.7	596.5	7.8	4.5	12.3	37.1
1966	424.0	10.7	321.6	191.3	512.9	755.5	0.2	14.0	14.2	37.5
1967	499.9	17.9	318.6	236.7	555.3	982.7	-0.7	9.1	8.5	45.5
1968	598.4	19.7	337.9	268.7	606.6	1,271.7	3.2	5.4	8.6	48.3
1969	679.6	13.6	392.8	293.8	686.6	1,589.8	8.1	3.7	11.8	46.8
1970	787.6	15.9	471.2	368.0	839.2	1,750.7	10.0	9.4	19.4	20.4

Source: Statistics Canada, *Trusteed Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

Table 5-10

SELECTED FINANCIAL DATA FOR TRUSTEED PENSION FUNDS
SPONSORED BY FEDERAL AGENCIES AND CROWN CORPORATIONS, 1957-1970

(Book Values)

Year	Net Cash Flows		Holdings at Year-End (\$ Millions)				Annual Changes in Holdings as Per Cent of Net Cash Flows			
	Millions	Year-to-Year \$ Percentage Change	Mortgages				Mortgages			
			NHA	Other	All	All Stocks	NHA	Other	All	All Stocks
1957	—	—	53.0	0.2	53.2	6.2	—	—	—	—
1958	45.8	—	84.4	0.2	84.6	11.6	68.5	-0.1	68.4	11.8
1959	53.1	15.9	107.0	0.2	107.1	18.9	42.4	-0.1	42.4	13.7
1960	44.2	-16.8	121.5	0.3	121.8	26.6	33.0	0.2	33.2	17.4
1961	47.9	8.4	136.8	0.3	137.1	2.9	31.9	0.0	32.0	-49.5
1962	57.7	20.5	159.0	0.5	159.5	11.5	38.5	0.3	38.8	14.9
1963	61.8	7.1	180.8	1.4	182.2	30.8	35.3	1.4	36.7	31.2
1964	65.3	5.7	186.8	2.7	189.5	50.0	9.1	2.0	11.2	29.4
1965	70.4	7.8	193.0	9.7	202.7	103.1	8.9	9.9	18.8	75.4
1966	76.4	8.5	190.7	42.8	233.5	126.7	-3.1	43.3	40.2	30.9
1967	89.0	16.5	185.2	75.9	261.1	174.6	-6.2	37.2	31.1	53.8
1968	96.9	8.9	197.9	85.2	283.2	237.7	13.2	9.6	22.8	65.1
1969	84.8	-12.5	214.7	90.5	305.2	290.7	19.7	6.3	26.0	62.5
1970	69.1	-18.5	236.5	109.2	345.7	299.8	31.5	27.1	58.6	13.2

Source: Statistics Canada, *Trusteed Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

Table 5-11

SELECTED FINANCIAL DATA FOR "INDUSTRY" CLASS TRUSTEED PENSION FUNDS, 1957-1970
(Book Values)

Year	Net Cash Flows		Holdings at Year-End (\$ Millions)				Annual Changes in Holdings as Per Cent of Net Cash Flows			
	\$ Millions	Year-to-Year Percentage Change	Mortgages				Mortgages			
			NHA	Other	All	All Stocks	NHA	Other	All	All Stocks
1957	—	—	43.0	76.5	119.5	139.1	—	—	—	—
1958	211.2	—	51.9	86.1	137.9	188.1	4.2	4.5	8.7	23.2
1959	216.3	2.4	68.7	95.6	164.3	221.4	7.8	4.4	12.2	15.4
1960	226.0	4.5	68.9	98.5	167.4	265.1	0.1	1.3	1.4	19.3
1961	251.2	11.2	83.5	103.7	187.2	361.8	5.8	2.1	7.9	38.5
1962	284.3	13.2	100.1	119.2	219.3	453.3	5.8	5.5	11.3	32.2
1963	336.4	18.3	122.4	138.6	261.0	540.7	6.6	5.8	12.4	26.0
1964	365.6	8.7	144.5	160.6	305.1	671.8	6.0	6.0	12.0	35.9
1965	400.0	9.4	151.7	205.7	357.4	818.0	1.8	11.3	13.1	36.5
1966	351.4	-12.2	153.2	215.1	368.3	981.9	0.4	2.7	3.1	46.6
1967	412.5	17.4	150.4	233.5	383.9	1,199.0	-0.7	4.5	3.8	52.6
1968	480.5	16.5	145.8	259.1	404.9	1,526.4	-1.0	5.3	4.3	68.1
1969	509.4	6.0	171.6	283.7	455.3	1,875.3	5.1	4.8	9.9	68.5
1970	371.0	-27.2	204.6	282.8	487.3	2,052.7	8.9	-0.2	8.7	47.8

Source: Statistics Canada, *Trusteed Pension Plans Financial Statistics* (Cat. No. 74-201), various issues.

3. *Assessing the Usefulness of a Residential Mortgage Market Corporation to Trusteed Pension Funds*

a) The Approach Taken

The crucial question at this point is this: if an RMMC were introduced and performed the activities outlined earlier, would any of the funds with mortgage investments below the target proportion developed earlier be motivated to move to that target?

At the outset, we want to make it clear that we do not have a conclusive answer to this question. We have, however, formed a "judgment" on the matter, based in large part on replies to the Project Team's April 1971 survey. Although the survey did not solicit opinions on the usefulness of an RMMC per se, it did contain questions bearing on certain aspects of the mortgage instrument and market to which the RMMC's activities would be directed. In particular, the survey solicited views on the extent to which certain features of the mortgage instrument and market were unattractive or inhibiting from the point of view of pension fund management. These views are examined in detail below.

b) Views of Trusteed Pension Funds on Features of the Mortgage Instrument and Market

(i) CLASSIFICATION METHOD FOR RESPONSES

For analytical purposes, the funds were classified by three attributes: (1) dollar value of mortgage investments, (2) dollar value of total assets, and (3) the proportion of the portfolio invested in mortgages. The classes were determined by inspection of the distribution of the funds over the domain of the attribute. What appeared to be "natural" clusters were kept intact where possible.

Classification by dollar value of mortgages enables us to compare the views of funds which have not embarked on mortgage investment in significant quantity with the views of funds which have had considerable experience with this investment medium. Given the existence of information costs, and hence the possibility of economies of scale and some sort of learning curve with respect to investment in mortgages, we could reasonably expect different views. Classification by the relative importance of mortgages in the portfolio may provide insights into the extent to which the funds' views are influenced by concerns with portfolio balance considerations—that is, with the "proper" distribution of the funds' assets among various investment media. Classification by fund size is intended to shed light on the extent to which views are influenced by the ability to exploit economies of scale in information costs and the desire to obtain flexibility with respect to large transactions.

Classifications by total mortgages and total assets, both of which are rationalized a priori in terms of ability to exploit economies of scale, may be partially confounded by the ability of the fund's management to obtain these economies through the management of assets in several accounts simultaneously. This will almost certainly be the case if a trust company has some responsibility for managing the fund's investments. It will certainly

be the case when the fund is that of a bank's or trust company's own employees. To gauge the potential effect of the last overlap, we analyzed the answers both with and without these funds.³⁵ We chose this approach over that of ignoring them completely because of the small size of our sample. There was no way, however, in which we could adequately control for the "biases" attributable to a trust company's having supplied the answers for a fund other than its own.

A final plausible classification scheme is the type of organization sponsoring the fund. As discussed earlier, certain funds which some provincial governments are in a position to influence, either directly or indirectly, are heavily invested in provincial and municipal bonds and, as a result, are relatively lightly invested in other media. This investment "bias" may or may not influence the affected funds' responses to our questionnaire. In any event, the size of the sample made it impracticable to cross-tabulate further by this attribute.

(ii) VIEWS ON FEATURES OF THE RESIDENTIAL MORTGAGE INSTRUMENT

The respondents were asked to rank features of the residential mortgage instrument which they found unattractive. Eight features were specified in the questionnaire (question no. 7). The respondent could add other features if he wished.³⁶ The features were to be ranked in decreasing order of unattractiveness.

The replies are summarized in *Table 5-12*. The table shows the number of funds assigning any rank to a feature and the number assigning either first or second rank to it. Only the six features most frequently ranked are tabulated. Of these, the first four are discussed individually below in their approximate order of overall unattractiveness. The rankings of the remaining features suggest that their overall impact is minimal.

TIME LAG BETWEEN COMMITMENT AND INVESTMENT OF FUNDS. This feature was found most unattractive by those funds with some, but yet small (both absolutely and relatively), investment in mortgages. It is noteworthy that, compared with several other features (borrower's right to call and lack of an equity feature), those funds substantially involved in mortgages did not find it particularly unattractive. This probably reflects the greater ability of large funds to handle the uncertainty of the timing of large outflows. Assuming this to be the case, there are undoubtedly several contributing factors. Among them are probably the fact that a single transaction of a given size takes a smaller proportion of a large fund's cash inflows, that large funds can probably move more easily into and out of very short-term investments, and that large funds may be more willing to make investments which imply forecasting of future spot rates, since they can probably count on the "law of large numbers" to compensate for any situations in which they embarrass themselves through poor forecasting.

BORROWER'S RIGHT TO CALL. This feature appears to be progressively more unattractive, the greater the involvement in mortgages (both absolutely and relatively). This seems reasonable since this feature causes

³⁵ Very little difference was observed.

³⁶ The questionnaire is reproduced as Appendix C.

Table 5-12

NUMBER OF FUNDS RANKING SELECTED CHARACTERISTICS OF THE MORTGAGE INSTRUMENT
AS MOST OR SECOND-MOST UNATTRACTIVE

	Lag from Commitment to Investment				Borrower's Right to Call			No Equity Feature			Foreclosure Against Individual			Amortization of Principal			Fixed Yields		
No. of Funds	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	
By Value of Mortgages (\$ Millions, at Book)																			
None	10	6	3	0	5	1	1	7	2	3	7	1	2	4	0	1	3	1	0
0.1 - 7.4	26	18	9	4	23	8	2	16	4	6	20	2	9	11	0	1	4	0	0
7.5 and over	7	5	1	3	7	3	4	5	3	0	3	0	0	2	0	0	2	0	0
Not disclosed	6	5	3	1	6	1	3	5	1	0	6	0	1	4	0	0	6	0	1
By Total Assets (\$ Millions, at Market)																			
Under 25.0	20	14	6	1	15	5	1	13	3	5	15	3	6	11	0	2	6	1	0
25.0 - 99.9	16	11	6	4	14	5	2	11	3	4	13	0	5	5	0	0	2	0	0
100.0 and over	7	4	1	2	6	2	4	4	3	0	2	0	0	1	0	0	1	0	0
Not disclosed	6	5	3	1	6	1	3	5	1	0	6	0	1	4	0	0	6	0	1
By Percentage of Portfolio Invested in Mortgages																			
0	10	6	3	0	5	1	1	7	2	3	7	1	2	4	0	1	3	1	0
0.1 - 8.9	18	12	8	2	16	5	3	11	2	6	13	2	5	5	0	0	2	0	0
9.0 and over	15	11	2	5	14	6	3	10	5	0	10	0	4	8	0	1	4	0	0
Not disclosed	6	5	3	1	6	1	3	5	1	0	6	0	1	4	0	0	6	0	1
All replies	49	34	16	8	41	13	10	33	10	9	36	3	12	21	0	2	15	1	1

Source: CMHC Project Team's Survey of Trusteed Pension Funds, April 1971.

uncertainty as to cash flows and, possibly more important, achievable long-term yields. The amounts subject to uncertainty are clearly larger, the greater the involvement. Accordingly, the higher the proportion invested, the greater the overall uncertainty because of this feature.

LACK OF AN EQUITY FEATURE. The unattractiveness of this feature appears to increase slightly with fund size and involvement in mortgages. This relationship suggests that larger funds are not looking at mortgages as substitutes for fixed income investments, but as competitors or substitutes for equity investment. It also suggests—very tentatively—that the type of mortgage in which a fund is interested (at the margin) probably changes with the fund's size and involvement.

AMORTIZATION OF PRINCIPAL. Rather surprisingly, perhaps, this feature is not viewed as a highly unattractive feature by any type of fund. Apparently, the associated cash inflows do not cause substantial problems, possibly because the amounts are highly predictable.

(iii) VIEWS ON FEATURES OF THE RESIDENTIAL MORTGAGE MARKET

Respondents' views on this subject were elicited in the same manner as for the mortgage instrument. Six features were specified in the questionnaire (question no. 10).

The replies are summarized in *Table 5-13*, in the same manner as in *Table 5-12*. While the six features are tabulated, only one is discussed below. The rankings of the remainder indicate that their inhibiting effects are neither widespread nor strong.

The feature viewed as most unattractive by the majority of respondents was the absence of regular quotations at which transactions in substantial quantities could actually occur. *Table 5-13* shows that concern with flexibility in making mortgage transactions becomes relatively greater as fund size increases. This does not necessarily imply increasing absolute concern. It could well be that none of the features listed was viewed as significantly inhibiting in an absolute sense by large funds or investors in mortgages. Certainly, servicing arrangements and fees charged by brokers and servicing organizations should be of little concern to large funds, given their ability to exploit any economies of scale which might exist.

It seems unnecessary, therefore, for large funds to be particularly concerned with flexibility in making mortgage transactions. Their needs for realizability, or more generally liquidity, appear to be minimal. Most funds in the Project Team survey indicated an ability to predict both cash inflows and outflows within 10 percent.³⁷ Moreover, the proportionate holdings of other readily marketable assets (Government of Canada bonds, Canadian and non-Canadian common stocks) are substantial, after due allowance is made for the investment practices of the municipal and provincial government funds.³⁸

An argument for marketing flexibility may derive from changes in the attractiveness to a particular fund of various types of mortgages over time. For example, a fund which makes a major policy change with respect

³⁷ See the classification of responses to question no. 2 in Appendix C.

³⁸ *Table 5-9* and Statistics Canada, *op. cit.*, *Table 14*.

Table 5-13

NUMBER OF FUNDS RANKING SELECTED CHARACTERISTICS OF THE MORTGAGE MARKET
AS MOST OR SECOND-MOST INHIBITING

	Absence of Quotations for Substantial Transactions				Absence of Frequent Market Valuations			Mortgage Brokers Type or Availability of Organizations			Fees Charged			Mortgage Servicing Organizations Type or Availability			Fees Charged		
	No. of Funds	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank	No. Giving Rank	1st Rank	2nd Rank
By Value of Mortgages (\$ Millions, at Book)																			
None	10	7	2	4	7	4	2	5	0	0	5	0	0	4	0	0	5	0	0
0.1 - 7.4	26	16	11	3	13	1	7	8	0	3	10	4	0	6	1	0	8	1	2
7.5 and over	7	6	5	1	5	0	4	3	0	0	2	0	0	2	0	0	4	1	1
Not disclosed	6	4	4	0	3	0	2	3	0	1	3	0	0	3	0	0	2	0	1
By Total Assets (\$ Millions, at Market)																			
Under 25.0	20	14	8	4	14	3	7	8	0	1	11	2	0	8	1	0	9	0	1
25.0 - 99.9	16	10	6	3	7	2	3	6	0	2	5	2	0	3	0	0	5	1	1
100.0 and over	7	5	4	1	4	0	3	2	0	0	1	0	0	1	0	0	3	1	1
Not disclosed	6	4	4	0	3	0	2	3	0	1	3	0	0	3	0	0	2	0	1
By Percentage of Portfolio Invested in Mortgages																			
0	10	7	2	4	7	4	2	5	0	0	5	0	0	4	0	0	5	0	0
0.1 - 8.9	18	13	10	2	11	1	7	6	0	3	7	2	0	4	0	0	6	1	0
9.0 and over	15	9	6	2	7	0	4	5	0	0	5	2	0	4	1	0	6	1	3
Not disclosed	6	4	4	0	3	0	2	3	0	1	3	0	0	3	0	0	2	0	1
All replies	49	33	22	8	28	5	15	19	0	4	20	4	0	15	1	0	19	2	4

Source: CMHC Project Team's Survey of Trusteed Pension Funds, April 1971.

to the proportion of the fund to be invested in certain asset categories may wish to increase or decrease components of its mortgage portfolio rather abruptly. Funds are said to be reluctant to realize losses, however, and unlikely to pursue an active trading policy to reduce mortgage investments when book values are below market values. This being the case, active selling of mortgages will occur only when yields are generally below those holding in the period when the mortgages were acquired. In any event, it seems fair to say that there would seldom be major policy changes which would require changes in the mortgage portfolio larger than those which would be accommodated through the repayment of principal or acquisition through existing channels. Accordingly, it is unlikely that secondary market facilities would be used extensively. This is quite distinct from whether or not the establishment of such facilities would increase mortgage investment. If funds are concerned with the loss of flexibility, quite apart from whether they actually exercise it, then eliminating the source of inflexibility may well increase the level of investment.

(iv) VIEWS ON ATTRACTIVENESS OF YIELD MARGINS

We have examined the surveyed funds' views on whether or not the yield on mortgages is currently high enough to compensate for those characteristics of the instrument and market which they perceive as undesirable. On balance, the answer is (barely) yes; the pattern varies among fund categories (*Table 5-14*). Rather surprisingly, the majority of funds with no mortgage investments felt that the yield does compensate. From this finding, we infer that the absence of mortgages in their portfolios is attributable to the view that yields on other investment media are more attractive, to non-monetary factors, or to perceived inability to invest in sufficiently large quantities to overcome diseconomies of small scale. The majority of funds with between \$0.1 million and \$7.4 million invested in mortgages felt that the yield was insufficient. While it seems paradoxical for funds simultaneously to hold mortgages and to feel that the yield is insufficient, such a situation could plausibly exist if the funds had felt that the yield was adequate when the mortgages were acquired, or that transactions costs and other considerations made it unfeasible to dispose of them. Finally, the majority of funds with \$7.5 million or more invested in mortgages felt that the yield was high enough to compensate.

When funds are classified by percentage of portfolio invested in mortgages, the pattern is again mixed. Funds not holding mortgages felt, on balance, that the yield was adequate. On the other hand, both categories for funds with mortgages were almost evenly divided as to the adequacy of the yield.

When funds are classified by total assets, the proportion viewing the yield as adequate increases with fund size. This relationship is reasonable, given the greater ability of large funds to exploit any economies of scale and to nullify the undesirable attributes through appropriate diversification of their portfolios.

(v) CONCLUSIONS DRAWN FROM FUNDS' VIEWS

The survey results are clearly replete with paradoxes. Perhaps this is in-

Table 5-14

RESPONSES TO QUESTION ON ADEQUACY OF YIELD¹

	No. of Funds	No Features Listed as Unattractive or Inhibiting	Some Features Listed and Answer Was:			
			Yes	No	No Opinion	Did Not State
<i>By Value of Mortgages (\$ Millions, at Book)</i>						
None	10	0	6	2	1	1
0.1 - 7.4	26	2	8	13	2	1
7.5 and over	7	0	5	2	0	0
Not disclosed	6	0	3	2	1	0
<i>By Total Assets (\$ Millions, at Market)</i>						
Under 25.0	20	1	8	10	0	1
25.0 - 99.9	16	1	7	5	2	1
100.00 and over	7	0	4	2	1	0
Not disclosed	6	0	3	2	1	0
<i>By Percentage of Portfolio Invested in Mortgages</i>						
0	10	0	6	2	1	1
0.1 - 8.9	18	1	7	8	1	1
9.0 and over	15	1	6	7	1	0
Not disclosed	6	0	3	2	1	0
All replies	49	2	22	19	4	2

¹ The question was: "Do you feel that the yield is typically high enough to compensate for unattractive and inhibiting features of the mortgage instrument and market?"

Source: CMHC Project Team's Survey of Trusteed Pension Funds, April 1971.

evitable, given such factors as the complexity of the investment decision, the simplistic way in which we examined certain relationships, the fact that past investment decisions (as manifested by 1969 portfolio composition) need not reflect views held in April 1971, and the possibility that the answers given by the individual or individuals who completed the questionnaire may not represent a consensus of the fund's investment committee.

Despite the paradoxes, it is clear that a substantial number of funds do feel that certain features of the mortgage market are inhibiting and that the yield does not compensate for these inhibiting features. As to whether they would be any more interested in mortgages as investments if the inhibiting features were eliminated by an RMMC, the answer is almost certainly yes. The unanswered question is "how much more?". A second unanswered question is the extent to which their interest would be dulled by changes in the yield spread between mortgages and other securities attributable to the RMMC's existence.

4. *Estimates of a Residential Mortgage Market Corporation's Impact on the Level of Mortgage Investment by Trusteed Pension Funds*

We now bring together the conjectures and the bits and pieces of data bearing on the proportion of assets which might be invested in mortgages, and the speed at which changes might be made if an RMMC were introduced. These items, together with some additional assumptions which are specified below, provide the basis for our estimates of the possible impact of an RMMC on the amount of mortgage investment that would be undertaken in the five years following its introduction.

a) Assumptions

Our first assumption relates to the other limits which profitability considerations might place on the activities of an RMMC.

The establishment of an RMMC would obviously be premised on the assumption that its existence would reduce certain inhibitions (either real or imagined) which hold down the extent of mortgage investment by certain financial institutions. This premise begs the question as to why existing institutions, and more particularly those in the private sector, have not acted to mitigate those inhibitions. The answer must surely be that it has not been to anyone's economic advantage to do so (in an expected value sense). This is not to say that no demand exists for the currently unavailable items or services; however, the expected revenues associated with this unsatisfied demand would not offset the expected costs (the latter defined to include some level of "normal" profit).

Of course, what is not considered profitable by the private sector today may be considered profitable tomorrow. In the past few years, there has been considerable development of private sector mortgage initiation and servicing activities.³⁹ By the time an RMMC might ultimately see the light of day, further developments will undoubtedly have occurred.⁴⁰

If one accepts our rationale for the existence of certain impediments to mortgage investment, then the question is raised as to the justification for an RMMC's undertaking to eliminate these impediments. Examination of that question is not within the terms of reference of this chapter; but one can easily envisage a justification based on the view that the social benefits accruing from an increased flow of funds into the mortgage market will far outweigh the opportunity losses associated with its operation. Alternatively, an argument might be raised that an RMMC could carry out this function more efficiently than any other institutional form now known or contemplated.

We have not raised this point in order to debate the merits of a particular form of income redistribution scheme, or the merits and efficiency of government versus private sector financial institutions. Rather, our purpose is to point out that, in the absence of detailed information on an RMMC and on the tolerance of its sponsors with respect to its profitability, we are really in no position to judge the extent to which it might increase the mortgage investments of trustee pension funds.

We have dealt with this problem in the same way as most problems are dealt with for which there is an absence of pertinent information—that is, we have made what we think is a reasonable assumption. We have assumed that the amount of "subsidy" involved in any RMMC intervention in the market would only be enough to make the expected returns (net of all transactions costs) to those funds holding less than the target proportion, just equal to the expected net returns for those funds currently at or above the target proportion.

³⁹ Ruby, *op. cit.*, pp. 15-16.

⁴⁰ One might reasonably conjecture that the act of seriously proposing the establishment of an RMMC might have deterred the private sector from pushing ahead with certain developments.

The remaining assumptions are given in point form below. If a rationale is not included, one has been given earlier in the paper.

1. Only certain types of funds would change their target proportion if an RMMC were introduced. All such funds belong to the "industry" classification. In general, federal funds are already above the target (*Table 5-10*). Provincial, municipal, and educational funds appear to be constrained—at least implicitly—to invest the bulk of their funds in provincial and municipal bonds.⁴¹ All other classifications are too small to matter. We further assume that "small" industry funds (below \$5 million total assets) will not change their targets, since their diversification into mortgages is likely to be made through pooled funds. Finally, we assume that industry funds which are already at or above the target specified in point (10) below will not alter their proportions.
2. The RMMC would be introduced at the beginning of 1972.⁴²
3. Year-end 1969 total assets of "industry" funds greater than \$5 million in size are \$4.8 billion, and the proportion in mortgages is 9 percent.
4. Year-end 1971 total assets of "industry" funds greater than \$5 million in size will be \$6 billion, and the proportion in mortgages will be 9 percent.
5. Net cash flow in 1972 to the affected funds will be \$540 million.
6. Annual rate of growth in net cash flows will be 12 percent.
7. The most pessimistic estimate of proportion of net cash flows to be allocated to mortgages is 20 percent.
8. The most optimistic estimate of proportion of net cash flows to be allocated to mortgages is 60 percent.
9. Year-end 1971 distribution of "industry" funds greater than \$5 million in size by percentage of total assets invested in mortgages is log-normal with a mean of 9.05 and a standard deviation of 8.61. These values were derived from the frequency distribution of the 1969 proportions observed for the twenty-six funds in this category for which the sponsoring organization authorized Statistics Canada to provide the necessary data to the Project Team.⁴³
10. The target for investment in mortgages is 20 percent of total assets.
11. The change to 20 percent in point (10) from the present level is attributable solely to the RMMC's existence.

b) Estimates

(i) POSSIBLE RANGE

Estimates of the increment to mortgage investments attributable to the RMMC's existence, given the above assumptions, are shown in *Table 5-15*. With only 20 percent of net cash flows allocated to mortgages, the annual increment attributable to the RMMC's existence is estimated at \$69 million in

⁴¹ We are assuming that it would take more than the introduction of an RMMC to shift provincial, municipal, and educational funds into significant levels of mortgages.

⁴² The estimates are not particularly sensitive to the starting date selected. Given our other assumptions, the later the introduction date, the greater the increase in the level of mortgage investment.

⁴³ In cases where the organization sponsored two funds, only data for the larger fund were used.

the first year, rising to \$113 million in the fifth year. At the other extreme, if 60 percent of the net cash flows is allocated to mortgages, the annual increment is estimated at \$273 million in the first year, rising to \$332 million in the third year and falling off to \$215 million and \$245 million in the fourth and fifth years respectively. The falling off occurs in the latter case because those funds originally below the target investment proportion reach the target more quickly, the greater the proportion of cash flows allocated to mortgages.

Table 5-15

ESTIMATED ANNUAL NET ADDITIONS TO MORTGAGES BY
"INDUSTRY" CATEGORY FUNDS WITH ASSETS OF \$5 MILLION AND OVER,
BASED ON FIRST SET OF ASSUMPTIONS

		<i>Annual Addition to Mortgages</i>		
<i>Percentage of Net Cash Flows Allocated to Mortgages</i>	<i>Year</i>	<i>Assuming Target Proportion Changes to 20 Percent</i>	<i>Assuming No Change in Target Proportion</i>	<i>Addition Attributable to Change in Target Proportion</i>
(\$ Millions)				
20 Percent (Most Pessimistic Estimate)	1	123	54	69
	2	140	60	80
	3	154	66	88
	4	173	78	95
	5	197	84	113
60 Percent (Most Optimistic Estimate)	1	327	54	273
	2	371	60	311
	3	398	66	332
	4	293	78	215
	5	329	84	245

Note: The computations are based on an assumed annual growth rate of 12 per cent in net cash flows.

Source: Computer simulations.

(ii) SENSITIVITY

To gauge further the sensitivity of our estimates to changes in our assumptions concerning the critical parameters (target proportion for mortgage investments, growth rate for net cash flows, and proportion of net cash flows allocated to the purchase of mortgages), we have estimated the potential increase in mortgage investment using several combinations of values for the critical parameters (*Tables 5-16 and 5-17*). Results are presented for the lowest and highest plausible values for the proportion of the portfolio to be invested in mortgages (17 percent and 30 percent) and annual growth rate of net cash flows (8 percent and 14 percent).

The results indicate that the estimates are not particularly sensitive to the growth rate assumed for net cash flows. They are sensitive, however, to the values assumed for the mortgage investment target proportion and the proportion of net cash flows allocated to mortgages. In general, a higher mortgage target brings about increases in the mortgage investment level that are systematically larger, the later the year being considered. In contrast,

Table 5-16

ESTIMATED ANNUAL NET ADDITIONS TO MORTGAGES BY
"INDUSTRY" CATEGORY FUNDS WITH ASSETS OF \$5 MILLION AND OVER,
BASED ON SECOND SET OF ASSUMPTIONS

Annual Growth Rate of Net Cash Flows	Year	Annual Addition to Mortgages		Addition Attributable to Change in Target Proportion
		Assuming Target Proportion Changes to 17 Percent	Assuming No Change in Target Proportion	
		(\$ Millions)		
8 Percent	1	118	52	66
	2	130	56	74
	3	142	60	82
	4	148	65	83
	5	160	70	90
14 Percent	1	130	55	75
	2	142	62	80
	3	166	71	95
	4	185	81	104
	5	215	92	123

Note: The computations are based on 20 percent of net cash flows being allocated to mortgages.

Source: Computer simulations.

an increase in the proportion of net cash flows devoted to mortgages has a greater impact, the earlier the year being considered.

(iii) SINGLE "BEST" ESTIMATE

To arrive at a single estimate of the RMMC's potential impact, it is necessary to assign single values to those variables for which a range was specified in sub-section 4(a). The overall "best" estimate is based on the following values for the determining variables:

1. Estimates are specified in assumptions (1) to (6) inclusive and (9) to (11) inclusive in sub-section 4(a).
2. Thirty percent of net cash flows will be allocated to mortgages

Using the above values, the annual increase in trustee pension funds' mortgage holdings attributable to an RMMC's existence is estimated as follows:

Year	\$ Millions
1	120
2	137
3	154
4	166
5	194

IV. THE RESIDENTIAL MORTGAGE MARKET CORPORATION
AS A PURCHASER OF MORTGAGES FROM
TRUSTEED PENSION FUNDS

In this section, our concern is with the use that trustee pension funds might make of an RMMC in order to sell mortgages from their portfolios.

Table 5-17

ESTIMATED ANNUAL NET ADDITIONS TO MORTGAGES BY
"INDUSTRY" CATEGORY FUNDS WITH ASSETS OF \$5 MILLION AND OVER,
BASED ON THIRD SET OF ASSUMPTIONS

		<u>Annual Addition to Mortgages</u>		
<i>Annual Growth Rate of Net Cash Flows</i>	<i>Year</i>	<i>Assuming Target Proportion Changes to 30 Percent</i>	<i>Assuming No Change in Target Proportion</i>	<i>Addition Attributable to Change in Target Proportion</i>
<hr/>				
(\$ Millions)				
8 Percent	1	340	52	288
	2	368	56	312
	3	398	60	338
	4	428	65	363
	5	439	70	369
14 Percent	1	362	55	307
	2	410	62	348
	3	468	71	397
	4	506	81	425
	5	577	92	485

Note: The computations are based on 60 percent of net cash flows being allocated to mortgages.

Source: Computer simulations.

There appear to be three reasons why a trustee pension fund might wish to sell some or all of its mortgage holdings: (1) to alter the portfolio's risk and expected return characteristics; (2) to "beat the market" through adroit in-out trading; and (3) to add to its cash holdings for purposes other than acquiring other assets. Each of these motives is discussed below.

Typically, a change in the portfolio's risk and expected return characteristics would involve a change in the proportion of fixed and variable income securities, or a change in the overall riskiness of the common stock portfolio. A reduction in the proportion of fixed income securities is a necessary, but not a sufficient, condition for a reduction in mortgage holdings. As long as the fund also held sufficient government or corporate bonds which could be disposed of (and for which, presumably, markets are more fully developed than for mortgages), it would not be forced to sell its mortgages in order to introduce its new policy. Moreover, as long as the fund was willing to implement its policy over some period of time rather than in one fell swoop, it might be unnecessary to sell any of the currently held assets.

Reinvestment of the principal repayments associated with mortgages, together with investment of the bulk of cash contributions and income in the desired asset could, conceivably, enable the fund to reach its new target proportions. This approach would also have the advantage of minimizing the transactions costs associated with the policy change. We conclude, therefore, that mortgages would have to be sold to effect a major change in risk and expected return characteristics only if the fund had a very substantial proportion of its assets invested in mortgages or if it wished to make the change over a very short period of time.

Ability to "beat the market" is something all fund sponsors hope their managers possess and, on occasion, some have actually done it. Several

recent empirical tests of portfolio managers' performance and of the capability of a variety of stock market trading rules⁴⁴ indicate, however, that the number of managers who are likely to beat the market consistently is very small indeed. Further evidence of the difficulties fund managers have in forecasting security prices is given by pension fund book and market values. At the end of 1970, the book value (which is roughly equivalent to cost) of all pension funds was \$11.1 billion.⁴⁵ In contrast, their market value was only \$10.6 billion. Finally, the empirical evidence also indicates that "inside information" is likely to be an important requisite if consistently superior performance is to be achieved by the "average" manager.⁴⁶ This comment is hardly earth-shattering; but it serves to bring out the point that mortgages are likely to be rather well down on the list of investment opportunities that are attractive on these grounds.

For the bulk of trustee pension plans, the need to convert securities into cash for purposes other than acquiring other assets is likely to occur very infrequently. As indicated in the introduction, the growth of these organizations as a group will be substantial and continuing, barring any major economic upheavals. Moreover, those funds which are large enough to acquire substantial mortgage portfolios are less likely than smaller funds to find it necessary to convert the bulk of their assets into cash quickly. Of course, we certainly cannot rule out this possibility; indeed, there have been several recent company shutdowns in the United States and Canada which have resulted in the termination of employment of a large number of employees with substantial accumulated pension credits. On balance, however, situations of this type are unlikely to be a major continuing source of business for an RMMC.

From the above discussion, it should be evident that we would expect trustee pension funds to make very little use of an RMMC in order to dispose of mortgages held in their portfolios. This conclusion seems consistent with the publicly stated views of some Canadian practitioners⁴⁷ and with the views of at least one leading mortgage market participant and observer in the United States. In his recent summary report on the economic aspects of pension plans, Dr. Roger F. Murray stated that "Efforts to develop a secondary market for mortgages seem unlikely to engage the interest of pension fund portfolio managers. The possibility of resale is well down the list of desired objectives."⁴⁸

⁴⁴ See, for example, Michael C. Jensen, "Risk, the Pricing of Capital Assets, and the Evaluation of Investment Portfolios", *The Journal of Business*, Vol. 42, No. 2 (April 1969), pp. 167-247; and Eugene Fama and Marshall Blume, "Filter Rules and Stock Market Trading", *The Journal of Business*, Vol. 39 (January 1966), pp. 226-41.

⁴⁵ Statistics Canada, *op. cit.*, Table 3.

⁴⁶ See, for example, James H. Lorie and Victor Niederhoffer, "Predictive and Statistical Properties of Insider Trading", *The Journal of Law and Economics*, Vol. XI (April 1968), pp. 35-54, esp. 46-47; and Myron Scholes, "The Market for Securities: Substitution versus Price Pressure and the Effects of Information on Share Prices", *The Journal of Business*, Vol. 45, No. 2 (April 1972), pp. 179-211, esp. 200-4.

⁴⁷ Ruby, *op. cit.*, pp. 7-8.

⁴⁸ Roger F. Murray, *Economic Aspects of Pensions: A Summary Report* (New York: National Bureau of Economic Research, 1968), p. 126.

Chapter 6
An Economic Analysis of a Residential
Mortgage Market Corporation
by Paul Halpern

I. INTRODUCTION AND OVERVIEW

In the mortgage field, one concept that ranks close to profitability for general acceptability is that of a "central bank" for mortgages, or a residential mortgage market corporation (RMMC).

An RMMC could be considered to have two purposes. On the one hand, it would act as a secondary market, standing ready to purchase and/or sell outstanding mortgages. In this function, the RMMC would not make commitments to primary mortgage lenders but would buy outstanding mortgages at market prices. These prices would include a provision for a normal rate of return for the RMMC. It is expected that this secondary market function would provide liquidity to the mortgage instrument; combine mortgages into portfolios that could be marketed to other institutions; and, related to the second point, sell mortgages to institutions not now in the mortgage market directly or indirectly. The net result of developing an RMMC would be to increase the flow of funds into the mortgage market.¹

On the other hand, the RMMC has also been considered as an arm of government policy intended to moderate the cyclical variability in the flow of funds in the mortgage market. In order to perform this task, a secondary market facility is not necessary. In fact, we will demonstrate that in order to moderate cyclical fluctuations, the RMMC cannot operate as a secondary market maker. This study will investigate, theoretically, the economic impact of introducing an RMMC having the two functions outlined above. The variables of interest will be mortgage rates (or yields) and flows of funds.

The mortgage market does not, however, operate independently of other security markets. Mortgages can be considered as substitutes, although not perfect ones, for bonds; any impact of the RMMC on mortgage yields will have an impact on bond yields and vice versa. In addition, it must be remembered that yields on bonds of different maturities are not independent.

¹ In fact, we will show that the RMMC will make mortgages a better substitute for bonds.

Therefore, a change in the mortgage yield due to the introduction of an RMMC will have an impact on the whole structure of bond yields—that is, the whole yield curve will be shifted.²

The outline of this paper is as follows. In Section II, we consider the purposes of a secondary market, discuss why it has not evolved on its own, and determine whether there are any savings to be gained by starting an RMMC.

Section III presents an analysis of the determination of mortgage yields and the resulting equilibrium flow of funds in the mortgage market. The analysis is complicated by the fact that mortgage yields are determined by the demand and supply of the stock of outstanding mortgages but the flow of mortgage funds is determined by the flow market.

In Section IV, we analyze the impact of the introduction of an RMMC on mortgage yields and flow of funds, and the yield differential between bonds and mortgages. We find that the yield differential will fall, but whether the mortgage yield falls or the bond yield increases depends on the elasticity of demand for mortgage funds in the flow market.

In Section V, we investigate and confirm the argument that a secondary market will improve the speed of adjustment to structural shifts in the mortgage and bond markets. We also show that the RMMC need not play a passive role in the secondary market but can speculate on the course of future rates.

Section VI investigates the ability of the RMMC to moderate interest rate changes, and the profitability of this action.

Finally, in Section VII, we argue that the RMMC cannot be both a trading organization and an arm of government policy. We also conclude that the RMMC will distort yields and incur losses if it attempts to prevent interest rate increases that are caused by structural changes in either the mortgage or the bond markets.

Throughout the discussion, it is assumed that there is no “breaking-in” period and that the secondary market will operate at long-run volumes.

II. RMMC AS A SECONDARY MARKET

The secondary market is “that part of the mortgage market in which existing mortgages are bought and sold”. This is contrasted with the primary market in which mortgages are originated. It is important to exclude from the secondary market those transactions in which the buyer promises to purchase the mortgage prior to its acquisition by the seller. In this case, we have primary market transactions by means of commitments.

At present in Canada, there are four major institutions that originate mortgages: banks, trust companies, mortgage and loan companies, and life insurance companies. These institutions buy mortgages either as principals—that is, they hold an investment portfolio composed of mortgages and other assets—or as agents (in fact, if not in law) for pension funds, life companies, and other large pools of funds. In addition, the pension funds invest

² This is true as long as the market for bonds is not segmented on the basis of the maturity of the bond.

in mortgages indirectly by purchasing deposit certificates of companies which hold a mortgage portfolio.

If the mortgage rate is above the rate payable on deposit certificates, the large pools of money may prefer to invest in mortgages directly. Since they are not set up administratively for servicing mortgages, the mortgage or trust companies will act as agents buying the mortgages and selling them to the companies.

An efficient secondary market would have as its focal point an institution which would stand ready to "make" a market by buying or selling mortgages for its own portfolio. Simultaneously, this institution could process mortgages into packages and sell these packages to the large pools of funds which want to hold a mortgage portfolio but are unwilling to originate and service it.

The mortgages would be bought and sold at current market prices (less a discount for the market maker's fee). These prices would depend on the demand for and supply of mortgages in the secondary market. Since the market maker holds an inventory, the price at which it would trade in mortgages would depend on the size of its actual inventory relative to its desired inventory. For example, if there were an excessive supply of existing mortgages coming into the secondary market, the market maker would buy them, but its actual inventory would then deviate from that desired. To entice the market maker to hold this excess, it must obtain a higher yield. The excess in the supply of mortgages would be purchased from the institutions at a reduced price. Trades in the secondary market would therefore reflect current prices and yields.

The main purpose of the secondary market, as we have defined it, is to provide liquidity to the mortgage instrument. Without a secondary market, institutions which desired to alter their mortgage portfolio would be forced to search for another institution that would provide the other side in the transaction. This is very costly—hence, search costs preclude a large volume of trading in existing mortgages.

With the introduction of a secondary market, however, institutions which want to alter their mortgage portfolio can buy mortgages from or sell them to the market maker. The search costs are reduced and thus liquidity is improved.³

We do not mean to imply that without a secondary market, mortgage portfolios are illiquid; rather, only individual mortgages are illiquid. One way of obtaining liquidity for a mortgage portfolio is to have an aged portfolio—that is, a portfolio with mortgages of different vintages. While this type of liquidity is sufficient for life companies and very large pension funds, it is not the type of liquidity that small pension funds *state* they want.⁴ It is definitely not the kind of liquidity needed by institutions that want the flexi-

³ Not all transactions costs, however, are removed. As we will demonstrate in a later section, determining risk characteristics of mortgages is a major cost and an impediment to establishing a secondary market.

⁴ We do not see why any pension fund, regardless of size, considers liquidity to be an important factor since its liabilities are very long term.

bility to alter the mortgage part of their portfolio quickly (for example, trust companies).

One obvious question is that if liquidity is so important and search costs are very large, why has a secondary market not evolved? One possibility is that the expected scale of a secondary market is not large enough to make it economically viable. A second argument is that in order to have a viable secondary market in the trading of any security, the securities traded must be homogeneous.

Of course, no securities are perfectly homogeneous, but we still observe a secondary market. In the case of corporate bonds, there is an independent rating scheme to distinguish between the risk quality of bonds, and the bond yields reflect these risks. For governments, the risk is constant, and government bonds are homogeneous.

Conventional mortgages, however, are not homogeneous. The quality of the mortgage depends on many factors; these include regional, borrower, and property differences. To make matters worse, these factors can change over time, so that each time a mortgage changes hands a check on these factors must be made. The costs associated with identifying the quality of the mortgage are probably the main reason why a secondary market has not developed in the conventional mortgage field.

Even if there were a fully developed secondary market, the mortgage quality issue is important. If the secondary market maker purchased mortgages at one price (that is, if no distinction were made for the quality of mortgages), institutions would sell their most risky mortgages to the market maker. Thus, the market maker would have a high risk portfolio not compensated by a higher yield. In addition, it would be difficult to resell these mortgages to institutions which wanted to increase their mortgage holdings.

There are many possible procedures to overcome this problem with conventional mortgages. First, the institution which sells mortgages to the market maker could guarantee their quality. Thus, if a mortgage is in default, it must be replaced by one of the same maturity and yield. In this way, the institution which sells the mortgage still bears default risk. Even if a mortgage is resold, the initial seller's guarantee is valid. This, of course, could result in a mortgage that has traded hands many times still having the original guarantee.

A preferable technique would be to have the market maker perform a quality check and grade the mortgage when purchased. The yield of the mortgage will reflect its quality. The market maker now has a portfolio whose yield reflects its risk. Also, on resale, the mortgage has a quality grading. The purchaser, however, accepts the default risk. The market maker in a sense puts a brand name on the mortgage which will be reflected in the yield. There are still problems, however, with this technique. First, only those mortgages which have been in the hands of the market maker will be graded. Second, since the quality rating can change each time the mortgage transfers hands, it must be regraded. This is costly and would retard the flow of mortgages in the secondary market. Third, the cost of grading the mortgages must be borne by someone. The final division of the cost will

depend on the elasticities of the demand and supply curves in the secondary market.

Another solution is to have all conventional mortgages insured against default.⁵ This is similar to the existing NHA mortgage. In this case, grading is unnecessary, as are yield differentials. The mortgages can be traded without any of the transactions costs associated with grading. Unfortunately, the problem arises as to who bears the insurance cost. If it is a flat percentage figure, as in NHA mortgages, how is this figure determined? The insurance premium may have no provision for any differences in the inherent risk of the mortgages.

If a conventional mortgage is to be insured, the issuer of the mortgage (the house owner) pays an insurance fee and obtains a lower interest cost. The fee can be considered as the present value of the dollar reduction in interest payments.

From the arguments presented above, it is likely that if a secondary market were to evolve, it would be in the NHA mortgage market where mortgages are homogeneous. Unfortunately, the data do not give us any information on the size of this secondary market. There is a large volume (in dollars) of mortgages purchased from trust and life companies.⁶ These purchases and sales, however, include many committed transactions and are not pure secondary market dealings.

A secondary market is not the only response available to deal with the illiquidity of mortgages. An alternative would be to set up a financial intermediary which would transform mortgages into more marketable securities. These securities would be valued on the basis of the underlying mortgage portfolio. For example, an institution may decide to set up an investment fund for mortgages, and these shares would be traded in a security exchange.⁷ A large institution which wants liquid, higher-yielding investments could purchase these shares for its portfolio and thereby invest indirectly in mortgages. If the pension fund wanted to alter the proportion of mortgages in its portfolio, it could buy or sell these shares. But as this does not increase the liquidity of mortgages for those companies that originate and hold mortgage portfolios, a true secondary market is preferable.

III. YIELD DETERMINATION IN THE MORTGAGE MARKET

Before analyzing the impact of an RMMC, we must investigate the determination of yields in the mortgage market. The process is complicated by the presence of an equilibrium flow of mortgages per unit time⁸ and a market for the stocks of mortgages outstanding.

In *Figure 6-1a* below, we show the demand curve for the flow of funds in the mortgage market during period t as a function of mortgage yield

⁵ It is preferable to have the payment stream (both principal and interest) insured. Thus, the company holding the mortgage would not be penalized if an individual were in arrears and then defaulted. With only default risk insured, mortgage companies would be loath to allow individuals to get very far behind in their payments.

⁶ D. B. DasGupta, *Secondary Mortgage Market in Canada* (internal CMHC memorandum, August 1968), pp. 6-14.

⁷ Alternatively, the institution which issues the shares can stand ready to buy them.

⁸ The time unit considered is not crucial for the analysis.

(r_M). The demand curve D_M is a decreasing function of yield and is derived from the demand for housing.⁹

The market for the stocks of mortgages outstanding is presented in Figure 6-1b. The supply curve is vertical at the existing stock, S^* . The

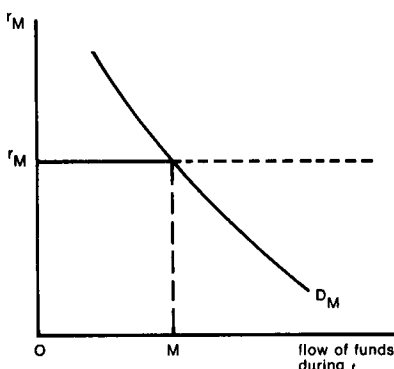


Figure 6-1a

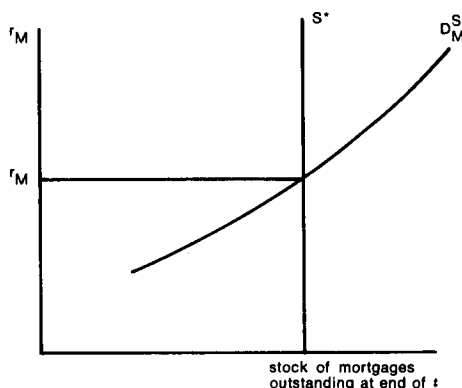


Figure 6-1b

demand curve D_M^S is an increasing function of the mortgage yield and is an aggregate demand curve for all the mortgage-holding institutions.

The aggregate demand for mortgages depends on the desired mortgage stock.

$$M_t^{i*} = f(r_{Mt}, r_{bt}, A_t^i, Z_{Mt})$$

where M_t^{i*} is the desired mortgage stock in period t for institution type i , r_{Mt} is the mortgage yield, r_{bt} is the yield on alternative investments, A_t^i is the total assets of institution type i in t , and Z_{Mt} is the non-yield attributes of mortgages. M_t^{i*} is positively related to r_{Mt} and A_t^i but inversely related to r_{bt} . The relationship between M_t^i and Z_{Mt} will be introduced in Section IV.

The mechanism for yield determination can be described as follows. The mortgage yield is determined in the market for outstanding mortgages. At this yield, r_M in Figure 6-1b, a certain flow of funds occurs during t , equal to OM in Figure 6-1a. This is an equilibrium flow of mortgage funds, and the flow is included in the stock supply curve.

To aid in understanding the stock flow mechanism, let us investigate the impact of an exogenous shock to the mortgage market. This shock is an increase in the amount of money available to primary lenders for investment purposes.

We start the analysis with the mortgage market in equilibrium at a yield r_M which elicits a flow of Oa per unit time. The increased money available for lending increases the assets of the institutions, which increases the stock demand for mortgages to $D_M'^S$. The first impact is to lower the mortgage rate to r_M' , and this lower rate increases the flow of funds to Ob .

⁹ It is possible to introduce into this market the flow supply of mortgage funds, which would be an increasing function of mortgage yields. This supply of funds, however, is determined by the difference between the actual stock and the desired stock of mortgages and will shift in response to shifts in the desired stock of mortgages and changes in the yield of mortgages. There must be equilibrium in the mortgage yield in the primary and secondary markets. Therefore, we can omit the supply curve in our analysis.

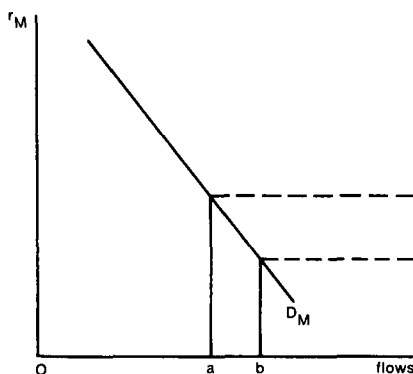


Figure 6-2a

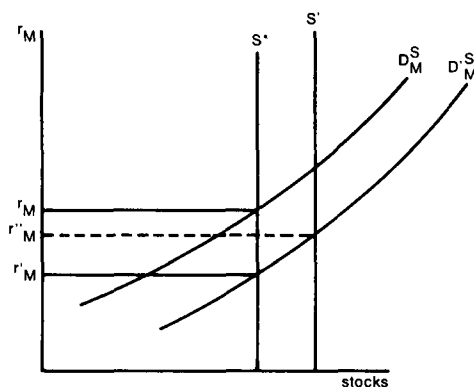


Figure 6-2b

But this increased flow will shift the stock supply to the right to S' by an amount equal to ab . This results in a yield of r''_M and a flow of funds below Ob . This feeds back into the stocks market, reducing the stock supply curve and the mortgage yield changes (these shifts are not shown). These feedbacks will continue until an equilibrium is restored. The net result of an increase in money available to primary lenders will be an increase in flow of funds and a reduction of mortgage yields (somewhere between r_M and r'_M).

In presenting the analysis, we have oversimplified the mechanism. To the extent that mortgage yields fall relative to bond yields, there will be an additional feedback reducing the demand for mortgages in the market for outstanding mortgages. This will have an impact on the equilibrium flows and the stock of mortgages.

We have some estimates of the elasticities of the curves. From econometric evidence, the demand for mortgage funds D_M is fairly elastic.¹⁰ We would expect that the demand for mortgages in the stocks market (D_M^S) to be very elastic. The demand in this market will depend on the number of close substitutes. Unless one believes that the market for mortgages is segmented from other securities (that is, that no substitution is possible), a large number of substitutes for mortgages exist, and a given change in the stock of mortgages will induce a small change in the yield on mortgages.

IV. EFFECTS OF INTRODUCING A SECONDARY MARKET

The total supply of mortgage money depends on the sum of mortgage approvals for all the institutions in the primary market. Using a stock flow adjustment model, we can specify the relationship as follows:

$$MA_t^i = \alpha [M_t^{i*} - M_{t-1}^i] + \beta R_t^i$$

where MA_t^i is mortgage approvals in period t for institution type i ; M_{t-1}^i is the actual stock of mortgages at the end of $t-1$ for type i ; and R_t^i is the mortgage repayments during t .

¹⁰ L. B. Smith, "On the Economic Implications of the Yield Ceiling on Government Insured Mortgages", *Canadian Journal of Economics and Political Science*, August 1967, pp. 420-31; L. B. Smith, "Financial Intermediary Lending Behavior in the Postwar Canadian Mortgage Market", *Quarterly Journal of Economics*, August 1967, p. 493-514; and L. B. Smith, "A Model of the Canadian Housing and Mortgage Markets", *Journal of Political Economy*, September-October 1969, pp. 795-816.

As already noted:

$$M_i^* = f(r_M, r_b, A_i, Z_M)$$

where $i = \begin{cases} \text{T} = \text{trust companies} \\ \text{CB} = \text{chartered banks} \\ \text{L} = \text{life insurance companies} \\ \text{ML} = \text{mortgage companies} \end{cases}$

Therefore, changes in the arguments of equation 2 will have an impact on the desired stock of mortgages (the stock demand curve) and the supply of mortgage funds.

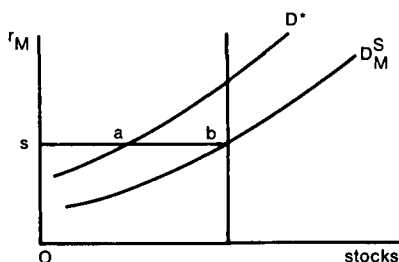
The important variable in our analysis is the sign of Z_M in relationship 2 where we identify Z_M to be the liquidity of the mortgage.

If a secondary market were established, the liquidity of a mortgage would increase. For the chartered banks, trust companies, and mortgage companies which hold a portfolio of mortgages, this increase in liquidity will allow them to substitute higher-yielding mortgages for lower-yielding investments without sacrificing liquidity. Therefore, the desired mortgage stock would increase. To the extent that these institutions act as agents for large pools of savings (such as pension funds), the increased liquidity of the mortgage *may* entice pension funds to place a large proportion of their portfolio in mortgages. These mortgages will be originated by one of the four mortgage institutions, thereby increasing the flow of funds into the primary mortgage market.

As for the life insurance companies, since their need for liquidity is low the value of the coefficient of Z_M^L will be small, and increasing the liquidity of a mortgage will be of little benefit to them. Hence, there will be no increased flow of funds into the mortgage market from this source. To the extent that secondary mortgage purchasers buy mortgages from life companies on a commitment basis, if they desire liquidity, the flow of funds from insurance companies will increase.

The impact of the introduction of a secondary market on the flow of funds and yields is presented below.¹¹

¹¹ If the market maker in the secondary market also holds a portfolio, the demand for mortgages in the stocks market will include the market maker's demand.



Therefore at yield Os , the aggregate demand is sb of which sa is held by the market maker and ab is held by private institutions. The demand curve by the market maker D^* is an increasing function of yield since it must be compensated to hold a larger portfolio. The horizontal difference between D^* and D_M^S must increase as yields increase since this difference is the private demand for mortgages. This will reflect the increase in quantity demanded as yields rise.

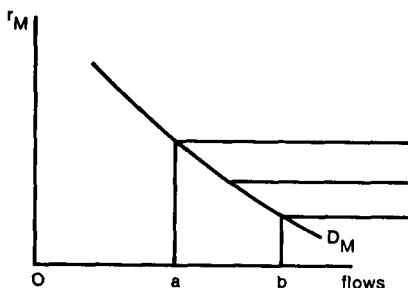


Figure 6-3a

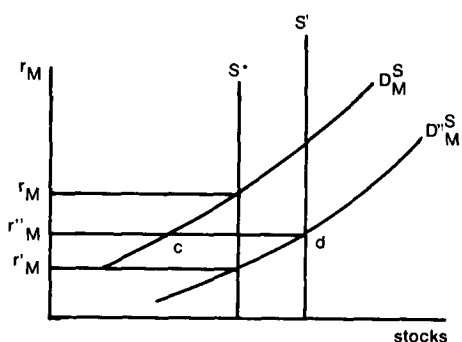


Figure 6-3b

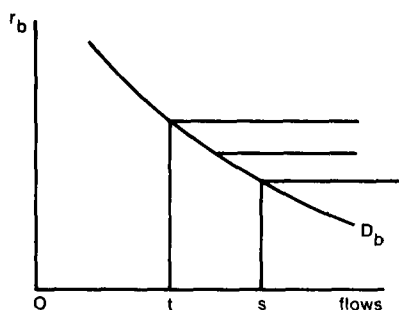


Figure 6-3c

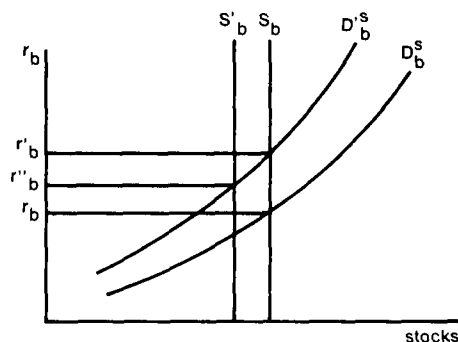


Figure 6-3d

Figures 6-3a and 6-3b present the flow and stocks markets for mortgages respectively; figures 6-3c and 6-3d present the markets for bonds, where r_b is the bond rate and r_M , the mortgage rate.

With the introduction of a secondary market, mortgages become more liquid. Therefore, the aggregate demand curve for mortgages in the stocks market increases to $D_M^{S'}$, lowering the yield to r_M' and increasing the mortgage flows to Ob (Figure 6-3a). This increased flow shifts the stock of mortgages to S' (by an amount equal to ab) increasing the mortgage rate to r_M'' . If we assume that this is the final position, we find that at r_M'' primary lenders are holding an increased portfolio of mortgages (Figure 6-3b) and the mortgage rate has fallen. There was no change, however, in assets of the primary lenders—in order to increase mortgage holdings they had to reduce bond holdings. This is portrayed as a shift to the left in the aggregate demand for bonds to $D_b^{S'}$ (Figure 6-3d). This increases the bond rate to r_b' and reduces the flow of funds in the bond market to Ot . This will reduce the stock of bonds to S'_b reducing the bond rate to r_b'' . Therefore, there is a higher bond yield and a lower equilibrium flow of bonds.

The net effects are a reduction in the mortgage yield; an increase in mortgages held; an increase in the bond yield, thereby narrowing the differential; and a reduction in bonds held. The magnitude of the changes in the rates will depend on the extent of the substitution of mortgages for bonds in the portfolios of institutions, and the elasticities of the flow demand

curves in the mortgage and bond markets. The narrowed differential, however, reflects the introduction of liquidity to mortgages and the consequent reduction in the risk premium¹²

To demonstrate the importance of the elasticity of the flow demand for bonds, assume that it is perfectly inelastic (see *Figure 6-4c*, below).

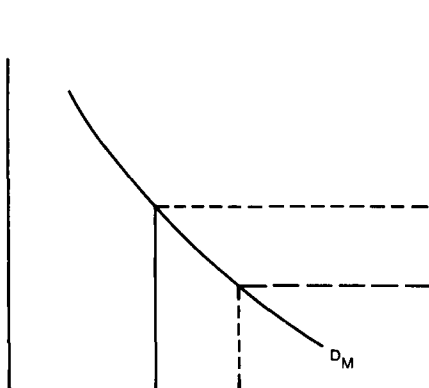


Figure 6-4a

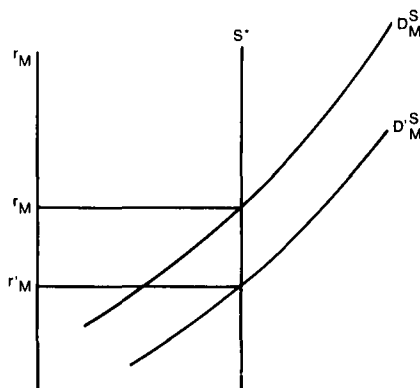


Figure 6-4b

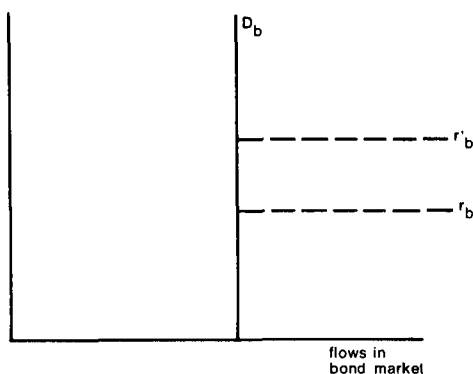


Figure 6-4c

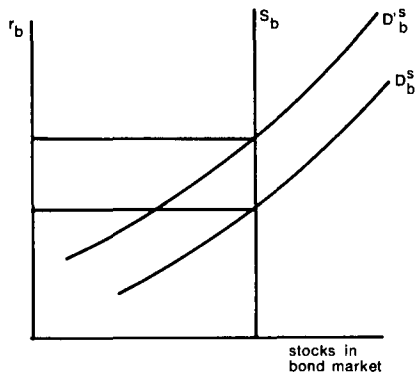


Figure 6-4d

The increase in liquidity shifts D_M^S to the right to D'_M^S since institutions are now willing to hold more mortgages. This increase in demand reduces the mortgage rate to r'_M and increases the flow. To pay for these added mortgages, the institutions attempt to sell bonds and reduce the flow of bonds. This reduces the demand for bonds to D'_b^S and increases the bond yield. Since the demand for bonds in the flow market is perfectly inelastic, the stock of bonds is not reduced and thus there is no money available to pay for the increased flow of mortgages in the mortgage market. Therefore,

¹² To the extent that the yield differential on the first round in *Figure 6-3* does not reflect the correct value, feedbacks will occur, shifting D_M^S and D_b^S until equilibrium is restored.

This is consistent with either the expectations or liquidity premium explanation of the yield curve. In fact, the introduction of an RMMC will shift the whole term structure curve as long as the market segmentation hypothesis is not valid.

institutions will substitute bonds for mortgages. The net effect of the introduction of a secondary market on the amounts of bonds and mortgages outstanding is zero; in other words, the amounts of bonds and mortgages outstanding are unchanged.

The substitution of bonds for mortgages will continue until the mortgage yield returns to r_M —that is, the demand for mortgages returns to D_M . At any lower yield, there would be an increased flow, but there would be no money available to pay for it. In the bond market, the demand for bonds increases, thus driving down the bond yield toward r_b . The final position, however, will still be above the original yield r_b . Since mortgages have been made more attractive vis-à-vis bonds, there must be a higher yield on bonds to induce institutions to hold the old stock.

The yield differential between mortgages and bonds has been reduced because the bond rate has increased slightly. Once again, this occurs because the risk characteristics of the mortgage have been altered. If the market participants realize at the outset that the flow demand curve for bonds is perfectly inelastic, then they will move directly to the terminal positions in the two markets.

The expected results are summarized below in *Table 6-1*.

Table 6-1
EFFECT OF INTRODUCTION OF SECONDARY MARKET
ON BOND AND MORTGAGE YIELDS AS A FUNCTION
OF THE ELASTICITY OF THE DEMAND FOR BONDS IN THE FLOW MARKET

<i>Elasticity of Demand for Bonds</i>	<i>Change in</i>		
	<i>Bond Rate</i>	<i>Mortgage Rate</i>	<i>Differential</i>
$-\infty$	0	—	—
$> -\infty, < 0$	+	—	—
0	+	0	—

V. EFFECT OF TRADING WITH A SECONDARY MARKET

In order to analyze the impact of trading in the secondary mortgage market, we must make some simplifying assumptions. First, we will assume that the RMMC (the market maker) has a large portfolio of existing mortgages; we are not yet concerned about how this portfolio is financed. Second, there is no difference between NHA and conventional mortgages. Third, no one individual participant in the trading can alter the yields by his purchases or sales; the prices and yields are determined by the transactions of all participants. Fourth, the RMMC can be considered as a private institution which attempts to maximize profits. Fifth, the RMMC does not speculate on the course of future interest rates. Assumptions four and five guarantee that the demand for mortgages by the RMMC will be an increasing function of interest rates and will be stable. Also, the portfolio of the RMMC will react to changes in market conditions.

In its pure trading role, the RMMC portfolio will depend on the aggre-

gate demand for outstanding mortgages. If some institutions wish to sell mortgages to the RMMC and other institutions wish to buy an equivalent amount, the aggregate demand curve will not change. Thus, the yield on mortgages and the holdings of mortgages by primary lenders and the RMMC will be unaltered.

Suppose, however, that more institutions want to sell mortgages than to

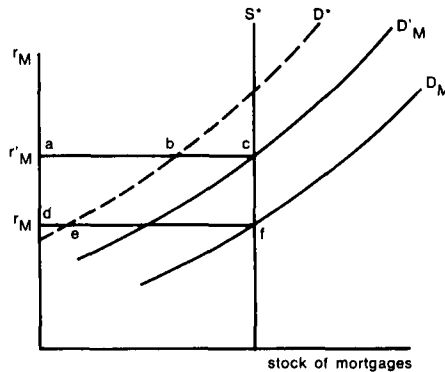


Figure 6-5

buy them. The RMMC's demand curve (D^*) remains unchanged. Therefore, the aggregate demand curve shifts to the left to D'_M and the yield increases to r'_M . At this higher yield, the private institutions hold mortgages equal to bc (in dollar value), a reduction from their previous holdings of ef . The RMMC portfolio has increased from de to ab and the yield has increased to compensate the RMMC for holding the larger portfolio.

1. Speed of Adjustment

Central to the concept of a secondary market is the presence of a market maker who will stand ready to buy or sell outstanding mortgages at market yields. Therefore, if there are any exogenous changes in the mortgage or related markets, institutions which hold mortgages can *immediately* react by selling or buying mortgages. Without this secondary market, sales of existing mortgage instruments, while not impossible, would be very costly, and institutions would be forced to wait for the impact of changed yields on the flows to alter their portfolios. Since the market maker is performing a service which saves institutions money, it will be compensated for performing its task. We can illustrate this speed of adjustment by comparing the mortgage market with and without a secondary market.

Assume that there is an unanticipated flow of funds into the hands of primary lenders. This will induce an increase in mortgage holdings.

First, consider the case without a secondary market.

The increase in funds will shift the aggregate demand curve to the right to D''_M ⁸ and this lowers the yield to r_M' . This lower yield increases the flow of funds from Oa to Ob (Figure 6-6a) which in turn feeds back to the stocks market as an increase in supply to S' . This raises the yield to r''_M . As a result

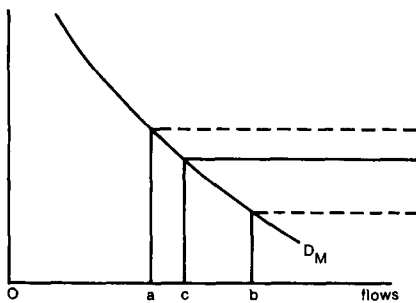


Figure 6-6a

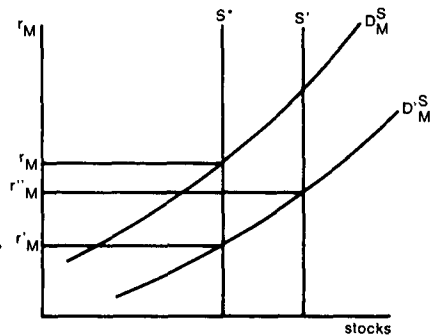


Figure 6-6b

of the increased flow, the primary lenders were able to increase the mortgages in their portfolio. The speed of adjustment depends on the time necessary to obtain the increased flow.

The case with a secondary market in which there is a market maker is presented in figures 6-7a and 6-7b below.

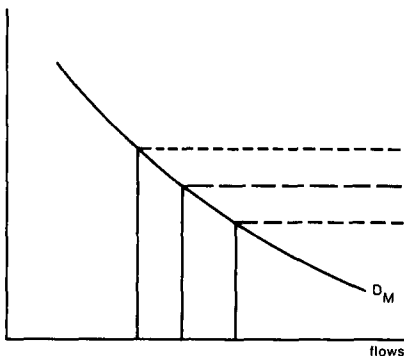


Figure 6-7a

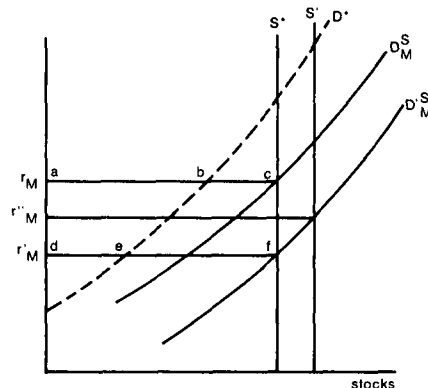


Figure 6-7b

The increased funds shift the aggregate demand curve to $D_M^{S'}$. This shift is due to the increase in private demand; the demand curve of the RMMC is still D^* . With the increased demand, private institutions buy mortgages from the RMMC. At the new yield r'_M , the RMMC holds a portfolio equal to de (a reduction from its portfolio ab at r_M). Private institutions hold ef , which is the increase they wanted. The lower yield r'_M induces an increased flow of mortgage funds. The private institutions, however, are satisfied with their existing portfolio. Therefore, they sell mortgages to the RMMC and the rate increases to r''_M . At this new yield, the private institutions hold more mortgages and the RMMC holds less than it did initially. The presence of the RMMC allows the institutions to increase *immediately* the size of the mortgage portfolio. If there is no RMMC, there is a time lag until the money is turned into mortgages. Therefore, in this case, the RMMC permits private institutions to put idle funds to work immediately.

2. *Lag of Changes in Mortgage Rates Behind Bond Rates*

In the United States, it has been observed that there is a considerable time lag for mortgage rates to reflect changes in bond rates. Guttentag argues that this is due to the fact that the mortgage market is a negotiated market and institutions want to be certain that the new bond rate is not just a random fluctuation.¹³

Another argument for the observed lag that Guttentag cannot completely dismiss is that the changed differential between bond and mortgage rates is due to a change in the risk premium. It is argued that at cyclical peaks risk premiums between mortgages and bonds will be smaller, since cyclical peaks are associated with high levels of business activity. In times of high business activity, risk premiums narrow more on riskier instruments. To test this, the narrowing differential at peaks should be reflected in the yield differentials of high and low-grade bonds and of government-insured (FHA) and conventional mortgages.

The data did not support this hypothesis. On examination of the differentials during expansions and recessions, bonds displayed the risk re-evaluation, but FHA and conventional mortgages did not. Therefore, Guttentag places more confidence in the first explanation; and we argue that if we introduce a secondary market, the lag will be reduced.¹⁴

When the bond rate increases vis-à-vis the mortgage rate, bonds become a more attractive investment, and institutions want to sell mortgages and purchase bonds. This arbitrage will bring the mortgage rate back into line with the new bond rate.

Guttentag argues that mortgage yield changes lag behind bond yield changes since the "transmission of bond yield changes to the mortgage market is entirely dependent on the activities of the primary lenders (*there is no dealer arbitrage*). Since these lenders respond only to what they consider pervasive movements in bond yields, which must prove out over time, the transmission process takes time and mortgage yields lag."¹⁵

If Guttentag is correct, the initial increase in bond rates does not induce a leftward shift in the stock demand for mortgages. Therefore, yields do not increase and the flows in the mortgage market are unchanged. The mortgage yields change only when the dealers accept the changed bond yield as a new permanent yield. The introduction of an RMMC, however, will drastically reduce the time lag. Since existing mortgages can be sold to the RMMC, the stock demand curve will decrease as rate-sensitive institutions alter their portfolios. Therefore, the mortgage yields will increase and the rate differential will be restored.

This example is just a special case of the speed of adjustment conclu-

¹³ J. M. Guttentag, "The Behavior of Residential Mortgage Yields Since 1951" in Guttentag and Cogan (eds.), *Essays in Interest Rates*, Vol. 1, National Bureau of Economic Research, General Series, No. 88 (New York: Columbia University Press, 1969).

¹⁴ *Ibid.*, pp. 42-44.

¹⁵ *Ibid.*, p. 31 (emphasis added). Guttentag's analysis also assumes that there is no arbitrage by investors other than the dealers.

sion. Both imply that the efficiency of the mortgage market will be improved since current mortgage rates will reflect current conditions in all markets.

In an efficient market, resources will be allocated to their most profitable uses. The regulator which assists in this allocation is the price system. In the mortgage market, the yields of mortgages, relative to alternative investments, will regulate the flow of resources. For the mortgage market to be classified as efficient, the yields on mortgages must rapidly reflect changes in conditions. Without a secondary market, mortgage rates are notoriously sticky. The introduction of the secondary market, however, will ensure that mortgage rates react rapidly to new information.

3. Speculation by RMMC

Throughout this analysis, we have assumed that the RMMC provides no more than a marketplace for trading and that it plays a passive role in determining the size of its own portfolio of mortgages. We have considered the RMMC in the same light as a market-evolved phenomenon which operates as if it were not a government agency. The RMMC, however, need not remain a passive participant in the secondary market. It can decide to speculate on the course of future rates. If it believes rates will fall, and the current rates do not account for this, the RMMC can enter the secondary market by purchasing mortgages. This will shift the RMMC demand curve for mortgages to the right.

If the other institutions agree that rates will fall, the aggregate demand curve will shift to the right and the secondary and primary mortgage rates will fall. If the other institutions feel that rates will increase or not change, the purchasers of the RMMC may not alter yields. The RMMC speculation will be profitable if the other institutions have different expectations, and if the RMMC is correct about the direction of future mortgage rates.

4. Caveats

Throughout this analysis, there has been an implicit assumption that may make mortgage practitioners uneasy. We have assumed that primary lenders will sell bonds to the secondary market even though this may result in capital losses—that is, a mortgage may be sold whose coupon rate is below the current market rate. While this assumption appears reasonable on academic grounds, it has been suggested that the primary lenders will refuse to take a book loss on their mortgages. (Do they refuse to take a book gain on their portfolio when the rates fall?) If they do not want to take these book losses, then the trading operations of an RMMC will be limited to mortgages whose coupon rates are no lower than the current rate. Therefore, trading may very well dry up when interest rates are high.

Unfortunately, we have no empirical evidence of the reluctance of lenders to take capital losses. In their desire for liquidity, however, they

may still incur capital losses if they are forced to liquidate government bonds.¹⁶

VI. GOVERNMENT POLICY OBJECTIVES ON THE FLOW OF FUNDS TO THE MORTGAGE MARKET

Many individuals¹⁷ argue that the burden of monetary restraint falls most heavily on the mortgage market. In periods of high interest rates, the flow of funds in the mortgage market is curtailed drastically as institutions move out of the mortgage market and into the bond market. This occurs because mortgage yields are sticky and because as the bond rates increase, the yield differential narrows. As the institutions move out of the mortgage market, mortgage yields slowly begin to increase, and eventually equilibrium is restored at a higher mortgage yield.

The presence of an RMMC as a trading facility will speed the movement of mortgage rates to changes in bond rates. It will not, however, ameliorate the impact of the monetary restraint on the flow of funds. The only technique available to moderate the diminution in the flow of funds is to inject money into the mortgage market.

Restating the argument, the differential impact occurs because the demand for mortgage funds in the flow market is very elastic; thus, small changes in yields induce large changes in the flow of mortgage funds.

Before analyzing the full impact on both the mortgage and bond markets of RMMC intervention to change the level of interest rates, we will demonstrate the technique to be used by the RMMC. First, consider the case where a large number of companies want to reduce the dollar value of mortgages in their portfolios. The initial impact would be a shift to the

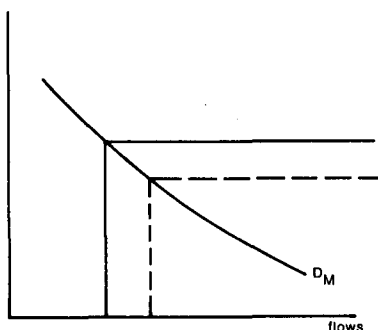


Figure 6-8a

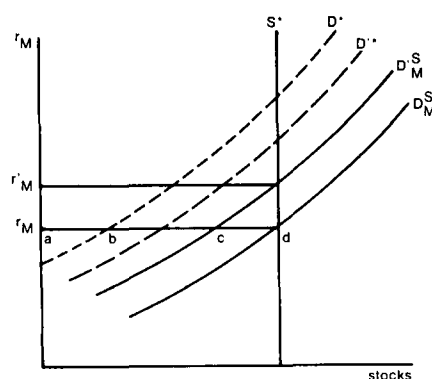


Figure 6-8b

¹⁶ In Chapter 4, it is observed that the law governing trust and loan companies generally limits their borrowing to an amount not greater than twenty times the excess of the value of their assets over their liabilities. Such law discourages taking book losses if the companies wish to maximize their use of leverage.

¹⁷ See, for example, H. H. Binhammer, *The Activities of a Central Mortgage Bank and Government Stabilization Policies*, unpublished background paper prepared for the Special Project Team on New Financing Mechanisms and Institutions, 1971; and DasGupta, *Secondary Mortgage Market*.

left in the aggregate demand curve in the market for outstanding mortgages to D_M^s from D_M^s (Figure 6-8b). Note that at the prevailing rate r_M , the RMMC still holds ab of mortgages and the private institutions want to reduce their holdings to bc . If the RMMC acted as a residual holder, the yield would rise to r_M' and the equilibrium flow would decrease.

If the RMMC wanted to ameliorate this fluctuation, it could increase its demand curve for mortgages from D^* to D'^* by the exact amount that the private institutions reduced their demand. Thus, the aggregate demand curve would shift back to D_M^s , and private institutions would be holding bc and the RMMC $ab + cd$. Therefore, the RMMC can have an impact on the mortgage yield and the flow of funds by standing ready to buy all mortgages sold to it at the prevailing yield. For the moment, we will ignore the impact of the RMMC intervention on the bond market and the resulting feedback to the mortgage market.

We can illustrate this technique further by considering the case where there is a structural change in the demand for housing. Assume that the demand for housing increases. This is portrayed in Figure 6-9a as a shift to the right to D_M^s of the flow demand for mortgages.

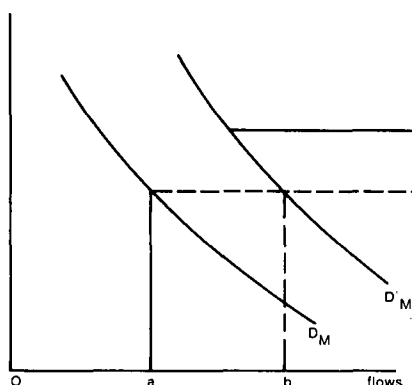


Figure 6-9a

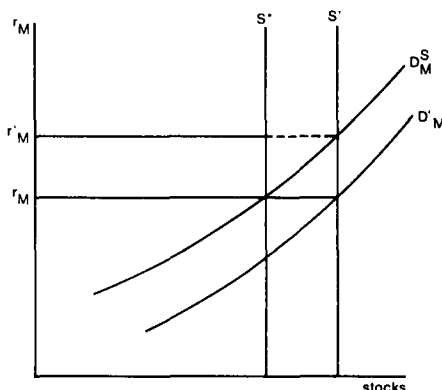


Figure 6-9b

At the prevailing rate r_M , the equilibrium flow of funds into the mortgage market increases by ab (in Figure 6-9b). This feeds back into the stocks market as an increase in the stock, and the stock supply curve shifts from S^* to S' . For the institutions to be induced to hold this larger stock, they must be paid a higher yield and the yield increases to r_M' . In order to ameliorate this increase, the RMMC can increase its demand for mortgages and shift the aggregate demand curve to the right to D_M^s . If the increase in demand is equal to the increased stock, the mortgage yield returns to r_M and the equilibrium flow is Ob . Therefore, by increasing its portfolio holdings, the RMMC can reduce the interest rate.

We could continue to present examples ad nauseum, but the basic technique is that the RMMC either increases or decreases its demand for mortgages in the stocks market.

We will now bring the bond market into the analysis. Figures 10a through

10d present the mortgage and bond markets in equilibrium. The RMMC considers that the prevailing mortgage rate is at a cyclical peak and wishes to reduce it, thereby increasing the flow of funds. In order to do this, it attempts to feed money into the mortgage market. One way of doing this is to increase its demand for mortgages. It will buy up mortgages, shifting the aggregate demand for mortgages to the right to D_M^s .¹⁸ The elasticity of the aggregate demand curve will determine the dollar volume of the purchase. In order to reduce the mortgage rate by a certain amount, the more elastic the aggregate demand curve, the greater the injection of money needed.

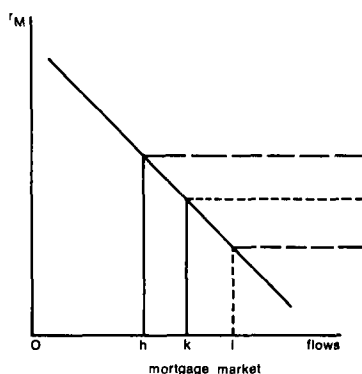


Figure 6-10a

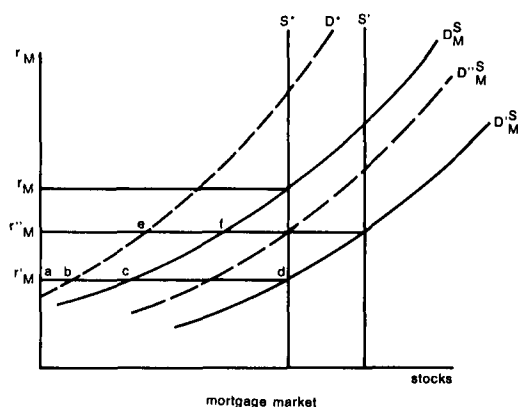


Figure 6-10b

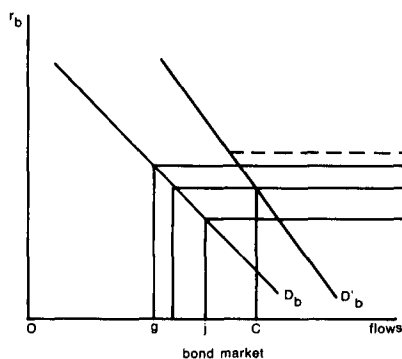


Figure 6-10c

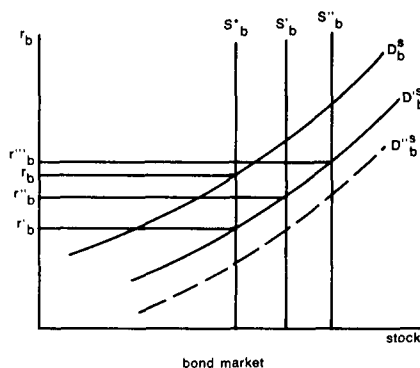


Figure 6-10d

With the increased aggregate demand, the mortgage rate falls to r_M^s , and the RMMC is holding ab and cd of mortgages in its portfolio and private institutions are holding bc . The lower yield, however, induces a greater flow, which shifts the stock of mortgages to S' , thereby increasing the yield to $r_M^{s'}$. With this higher yield, private institutions hold ef in mortgages. The private institutions take the funds released and purchase bonds. This in-

¹⁸ The RMMC could also achieve the same end by making commitments to buy all new mortgages issued by the primary lenders. This would have the same impact on our curves.

creases the stock aggregate demand for bonds to D''_b . This will reduce the yield on bonds, thereby increasing the flow of funds into the bond market. This feeds back into the stocks market as an increase in the stock of bonds outstanding to S'_b and increases the bond rate to r''_b . Therefore, the initial impact is a reduction in the mortgage rate and a reduction in the bond rate.

We must consider how the RMMC finances its purchases of mortgages. Assume that it issues bonds that are guaranteed by the Government.¹⁹ This will shift the demand for bonds in the flow market out to the right to D'_b by the amount of money needed. At the yield r''_b , the flow of funds in the bond market increases to OC . This is an increase in the stock of bonds to S''_b . The bond rate will increase to r'_b , and the flow is reduced.

The net effect in the short run is presented in *Table 6-2* below, if we assume that the RMMC issues bonds to finance its purchases of mortgages.

Table 6-2

HOLDINGS AND YIELDS OF MORTGAGES AND BONDS

	<i>Holdings of Private Parties</i>	<i>Yields</i>
Mortgages		
Bonds	decrease increase	decrease increase

In the short run, the RMMC has been able to reallocate funds from the bond market to the mortgage market and has reduced the yield differential between mortgages and bonds. The private flow of funds for mortgages is Ok , an increase of hk (*Figure 6-10a*); and the private flow of funds for bonds is Og (*Figure 6-10c*), where gj is the amount of bond financing attributable to private investors reinvesting the proceeds of mortgage sales to the RMMC.

We cannot, however, conclude the analysis yet. If we assume that mortgage bond yields differ by a risk premium, and if the risk premium has not changed as a result of RMMC action, arbitrage will occur.²⁰ Since the aggregate demand for mortgages is a function of the bond rate and these rates have increased, the demand for mortgages will fall. Conversely, with a fall in mortgage rates, the aggregate demand for bonds will increase. The former yields a shift of D''_{M^S} to the left to D'''_{M^S} in *Figure 6-10b*; the latter is a shift of D'_b to the right to D''_b in *Figure 6-10d*. If the RMMC stood ready to buy the mortgages, there would be a very fast reaction and the portfolios of the private institutions would change rapidly. In fact—although we do not show it on the diagrams, since they would become hopelessly complex—the mortgage and bond rates would return to their original levels r_M and r_b . If the RMMC allowed trading, the long-run position would be obtained very rapidly and the old yield differential would exist. The RMMC could state, however, that it refuses to trade in outstanding mortgages. In this case, the time taken to return to the original rates would be much longer. The speed of adjustment in fact depends on the elasticity of the mortgage demand curve

¹⁹ If this is the case, the yield on these bonds will be close to the yield on government bonds. This is a subsidy by the government, since the bonds of the RMMC will be riskier than government bonds, but the government is accepting a lower yield.

²⁰ This again assumes that the market segmentation hypothesis is correct.

in the flow market. The more elastic the demand, the faster the return to the long-run equilibrium. The time lag may be sufficiently long that by the time the long-run adjustment is made, interest rates are falling and the long-run position will be at new, lower rates.

As is the case with any type of stabilization, timing is crucial. If the RMMC attempts to lower rates when they are in fact already falling, the attempt at stabilizing may in fact be destabilizing and may cause rates to decline too far.

The profitability of this stabilizing policy cannot be determined without some type of simulation, but we can point out that in the short run, if mortgage rates are reduced, the RMMC will obtain a capital gain on its mortgage portfolio. The increased bond rate, however, yields a capital loss on the RMMC's bond portfolio. The net impact depends on the relative sizes of the bond and mortgage portfolios and the magnitudes of the yield changes.

VII. INCONSISTENCY OF TRADING AND STABILIZATION POLICY OPERATIONS

From the analysis in Section VI, we can see that simultaneously performing a secondary market function and a policy stabilization function is inconsistent. When moderating cyclical movements, the RMMC must refrain from trading in order to be successful. If it engaged in trading, institutions would rapidly be able to arbitrage the bond and mortgage yields back to their old levels.

Another example may clarify this analysis. Suppose that the bond rate increased and the RMMC wanted to keep the mortgage rate from increasing. This implies that the RMMC would attempt to maintain a yield differential that was smaller than the risk premium. Since bonds are more attractive investments, institutions will move out of mortgages and buy bonds. This will increase the yield on mortgages (and may modify the increased yield on bonds) until the equilibrium risk differential is restored. As we have argued before, if the RMMC acts as a passive participant, the mortgage yield will reflect the altered conditions in the bond market.

If the RMMC attempts to hold the existing mortgage rate, it must buy all mortgages offered to it at the existing yield. Therefore, the RMMC will build up a large portfolio of outstanding mortgages. To the extent that the RMMC finances its mortgage purchases with bonds, the risk differential will not be reduced and the incentive to trade mortgages for bonds will continue. Since the mortgage yield does not increase, the flow of funds in the mortgage market does not decrease and the RMMC may end up in the unenviable position of holding all outstanding mortgages. If the RMMC refuses to trade, however, it will be able to retard the speed of adjustment of mortgage yields to the new, higher bond yield.

In order to pursue its policy of interest rate stabilization, the RMMC must refrain from operations in the secondary market. From an efficiency point of view, however, it is precisely when the RMMC opts out of the secondary market that it is needed most.

The conclusions presented for the bond example can be generalized to

include cases where the RMMC attempts to prevent changes in the mortgage yield induced by structural changes in the bond and/or mortgage markets. In these cases, the institutions alter their demand for mortgages. The basic reason for their poor success in this area is that the RMMC is artificially trying to maintain a yield differential different from that which would exist in the market to reflect the risk premium for mortgages over bonds.

The RMMC can be successful in moderating yield changes only if the yield changes are random fluctuations. But it is unlikely that the RMMC can distinguish between random and structural changes. The RMMC must therefore make a policy decision. Will it be a market maker in the secondary market, or a mortgage yield moderator? These two purposes, unfortunately, are mutually exclusive.

Chapter 7

Postscript

by J. V. Poapst

On May 15, 1972, Bill C-209, the Residential Mortgage Financing Act, was given first reading; and on February 1, 1973, it was reintroduced, with some changes, as Bill C-135. Bill C-135 changed the name of the Corporation to the Federal Mortgage Exchange Corporation. Clauses 4 to 16 related to the FMEC. Part I of this chapter describes briefly the FMEC which the Bill would establish and compares it with the RMMC proposed in this report. Part II consists of observations on the proposed corporation and its possibilities. Part III is a concluding comment.

I. THE FMEC OF BILL C-135

Bill C-135 would establish the FMEC as a Crown corporation responsible to the Minister of Finance, with provision for transfer of its control to non-government owners. For regulatory purposes, the Corporation would be subject to the Loan Companies Act, except as provided otherwise in the Residential Mortgage Financing Act.

The FMEC of Bill C-135 has three objects. The first is to buy and sell residential mortgages that are eligible for investment under the Loan Companies Act. This includes both NHA and conventional mortgages. The second object is to *undertake* to buy or sell the foregoing types of mortgages—that is, to make advance commitments. The third object is to make collateral loans on the security of the foregoing types of mortgages for periods of maturity not greater than one year.

The Corporation is empowered to deal in liquid assets in the form of deposits with, and short-term obligations of, banks and trust and loan companies. Its liquid asset holdings thus may contribute indirectly to housing finance. It is also empowered to invest “funds not otherwise being applied in the furtherance of its objects” in the full range of investments specified under the Loan Companies Act, sub-section 60 (1). This includes federal, provincial, and municipal bonds, corporate bonds and stocks, and real estate for the production of income. If the FMEC’s mortgage portfolio is subject to large swings over credit cycles, conceivably it might acquire temporary

holdings of a variety of assets. Alternatively, short-term financing could be used and run off in times of slack.

The total financing capacity is set initially at \$400 million. The authorized capital is \$100 million, and outstanding debt is subject to a limit of \$300 million. The latter amount may be raised by the Governor in Council. The Act is silent on the limit to leverage. It states that Section 68 of the Loan Companies Act, which governs leverage, does not apply.

The first offering of shares must be made to the Government. Thereafter, the Government's participation is limited to the initial financing capacity of the Corporation. It is thus anticipated that subsequent growth will be through direct financing by the FMEC. Government shareholdings may be sold, subject to approval by the Governor in Council. Majority ownership, however, must remain in Government hands until Parliament provides otherwise.

II. OBSERVATIONS

1. *Location of FMEC in Government*

Bill C-135 would activate and extend functions now allocated to Central Mortgage and Housing Corporation, and would transfer responsibility for administering them to the Department of Finance. This would place responsibility for developing an important segment of the capital market in the hands of the government officials with greater and broader knowledge of Canada's capacity market. CMHC has developed an efficiency in the administration of insured mortgage loan origination and servicing. The requisite skills for this differ significantly from those required for operating a secondary market facility for a large segment of the capital market.

CMHC has tried to broaden the NHA component of the residential mortgage market. It has widened the ranks of approved lenders. It has attempted to familiarize trustee pension fund managers with the advantages of NHA mortgages as investments.¹ For a time, it maintained a lender of last resort facility for residential mortgage lenders. It conducted a series of auctions of NHA-insured mortgages.

Unfortunately, initiative with the last two measures, which relate to the objects of the FMEC, was lost. The punitive terms of the lender of last resort facility precluded its use except in dire emergency. The series of auctions ended in 1965, and investment dealers who had been induced to establish mortgage departments suffered a setback. The creation of a separate entity, with provision for eventual private control and ownership, helps to convey the intent that the financing mechanisms will be available continuously.

2. *Location in the Private Sector*

Apart from the foregoing considerations, an FMEC might not develop readily under CMHC auspices. CMHC has a heavy involvement with subsi-

¹ Central Mortgage and Housing Corporation, *Insured Mortgages as Investments, A Guide to Investment Opportunities in National Housing Act Mortgages* (Ottawa: CMHC, 1970).

dized housing of one form or another, and there is a strong orientation in the organization toward assisting the poor. It is no criticism to suggest that this orientation would not blend well with that of an FMEC, which the Project Team felt should be staffed by personnel with strong entrepreneurial tendencies and a developed taste for profit making in the capital market. This argues for locating the FMEC, sooner or later, in the private sector.

The FMEC will make a contribution to the Canadian economy if it improves the resource allocation efficiency of the capital market. This means that, given an FMEC, financial savings will be directed more to finance real investments which offer higher long-run real rates of return, after allowances for risk and the cost of moving funds from supplier to user. The FMEC will make its profits by successfully assailing imperfections within the residential mortgage market, and by linking that market and other components of the Canadian capital market. Its very success in reducing specific imperfections, however, will reduce the profits associated with assailing them. The FMEC will not engage in activities from which other institutions are precluded. Indeed, its function can be described as a catalyst. Thus, profits on its various activities will tend to decline. If the institution lives by profits, it will be strongly motivated to search for further market imperfections to exploit. Whether the institution is publicly or privately owned, it is desirable that it establish and maintain an entrepreneurial spirit. It is traditional to believe that this is easier to do in the private sector.

3. Required Rate of Return

The fact that the FMEC would be financed with government funds for some initial period does not lower the long-run rate of return it should earn. If resources are not to be wasted, establishing an FMEC should not be at the expense of undertaking some other project of comparable risk which offers a higher rate of return.² Here risk refers to the probability of earning some specific minimum rate of return, not whether bond holders alone will be paid. If the FMEC is expected to earn less initially than the required long-run rate of return, then, to be justified, it must at some point be expected to earn more than the required rate.

Conceptually, the problem of determining the required rate can be approached from the financing side. It is an average of the expected rates of return on debt and equity prevailing in the capital market for investment at comparable risk. The rates are weighted by the long-run proportions of the amounts of each type of financing used. The problem is complicated by the fact that the rates for equity and debt themselves depend upon the proportions in which they are combined. The required rate of return determined in this way is the FMEC's cost of capital.

The cost of capital is difficult to estimate in practice. Nonetheless, the risk of using too low a figure will be reduced if three simple points are recognized in establishing a rate for policy purposes. First, the expected rate of return on equity is not the popularly referred to dividend yield or earnings yield, but some rate higher than the bond yield. Second, retained earnings

² The criterion, of course, is applicable to other Government activities.

are not a free source of funds, but simply equity financing acquired without incurring transactions costs. Finally, the bond rate is some rate higher than the Federal Government rate of comparable maturity.

It is worth noting that in business finance, it is common practice, not to face up to the task of estimating the company's cost of capital, but to assume some minimum acceptable rate instead. The rate commonly assumed is 10 percent after taxes. This rate is for non-financial companies. For a company whose assets are high-grade financial instruments, the level of leverage can be higher and the rate lower.

As observed in Chapter 1, the earnings attributable to the FMEC will not equal the earnings which accrue to it. If the FMEC's activities lead to a more efficient allocation of resources, some of the benefits will accrue elsewhere in the economy—for example, to borrowers in the form of slightly lower mortgage interest rates. Conceptually, such benefits, and external costs if there are any, should be taken into account in determining the rate of return attributable to the FMEC. If the attributable rate is greater than its cost of capital, the FMEC's existence is justified. If the rate which accrues to it is below its cost of capital, it requires a subsidy to operate as a private enterprise.

4. *Sources of Earnings*

To enable the FMEC to concentrate on trading and short-term collateral lending, it was recommended in Chapter 3 that it not originate mortgage loans or service them. These activities are not included in the objects of the FMEC of Bill C-135. Nevertheless, it would have seven distinguishable sources of earnings: (1) collateral lending, (2) making advance commitments, (3) transactions services, (4) switching operations, (5) speculating, (6) carrying inventories, and (7) interest on liquid assets and investment of "idle" funds. If these seven potential sources taken together provide debt and equity investors with competitive rates of return, no subsidy is required.

For collateral lending to be profitable, there must be borrowers willing to pay a profitable price. The replies in the Interview Survey of Lending Institutions and Investment Dealers indicated an interest in using credit of this kind (see Appendix B). Asked "Can you visualize occasions when you would like to borrow against your mortgage portfolio?", eighteen of forty interviewees replied "yes" (question no. 3). Of forty interviewees, sixteen felt that the credit should be available on request (question no. 5). Five interviewees stated they would use the facility several times a year, and eight replied that they would use it less than once per year, while fifteen said they would use it reluctantly (question no. 6). There is thus an indication of intention to use the facility. Conceivably, if frequent users find the borrowing advantageous, competitors may adopt the practice as well.

No question was asked about the rate of interest borrowers would be willing to pay. Interviewees were asked the interest rate they thought the loan rate should be related to (question no. 8). The most common reply was the prime rate charged by chartered banks (thirteen interviewees), followed by the going rate on NHA mortgages (ten), and then the going rate on conventional residential mortgages (six). While "related to" is not synony-

mous with "equal to", these choices provide some indication that low interest rates were not expected. Given that the loans would be short term and associated in some cases with long-term investment decisions, the demand might well not be very interest sensitive over some range.

While our evidence is sketchy at best, it would seem that a collateral lending facility, operated in conjunction with the trading facility, could be profitable but would not contribute a large amount of earnings.

The second source of earnings listed is making advance commitments, and Bill C-135 includes this in the FMEC's objects. As outlined in Chapter 3, the making of advance commitments by the FMEC was recommended with some reluctance. Where advance commitments provide back-up funds for the origination of residential mortgages which the originator does not intend to sell, they amount to direct lending in disguise. It was recognized, however, that there is a handful of mortgage banking firms now operating in Canada and that their growth in number and size would enhance the development of the secondary market. It was also considered that external conditions beyond their control sometimes precluded them from readily obtaining necessary interim financing. Accordingly, a restrained policy of making advance commitments was recommended. If this policy is followed by the FMEC, the activity is likely to provide only a small amount of earnings.

Earnings on transactions services are simply the earnings obtained for executing orders to buy and sell. Gains attributable to packaging are included, but not speculative gains or losses. Responses in the Interview Survey of Lending Institutions and Investment Dealers to questions about the trading facility were clearly more positive than for the lending facility. Thirty-four respondents could visualize occasions when they would like to buy or sell mortgages compared to eighteen for the comparable question on borrowing (question no. 12). Similarly, twenty-one felt the trading facility should be available on request, compared to sixteen for the loan facility (question no. 14). Again, eight interviewees said they would use the trading facility several times a year (compared to five for the borrowing facility), ten would use it less than once a year (eight for borrowing) and eighteen would use it reluctantly (fifteen for borrowing). As with the borrowing facility, if users find the trading facility advantageous, competitors may be encouraged to use it as well.

Further demand for trading services may arise from institutions not covered in the survey. Trusteed pension funds could be expected to use the FMEC as an alternative to acquiring mortgages through mortgage bankers and lending institutions who originate loans for sale. Similarly, they may have occasion to sell their holdings should they wish to change their investment strategy. But this probably would occur infrequently. A second possible type of customer is the open-end mortgage investment company, should it prove feasible in the presence of an FMEC.

Trading services, presumably, will contribute more to profits than either the loan facility or the making of advance commitments.

The residential mortgage market is not in reality a true national

market. It is a welter of local markets partially linked by the branch systems of the major lending institutions. The larger institutions originate mortgage loans over a high proportion of the well-settled areas of the country. Thus, to some extent at least, they are able to shift the geographical distribution of their lending in response to shifts in demand. The smallness of the secondary market, however, precludes other investors from participating in this process. There is some evidence to suggest that an FMEC could earn profits by engaging in geographical switching operations; that is, it would buy loans in one region or locality while simultaneously selling comparable loans in others.

The suggestive data appear in *Table A-18*. Inspection of these data shows that regional differences in the average interest rates on NHA-insured loans approved for new construction for house ownership by private lenders during a month can range as high as 0.37 percent (see Ontario and Quebec, February 1971).³ The rankings in the averages frequently change from month to month. The low risk characteristic of the type of loan and the short-term characteristic of the changes in ranking together reduce the plausibility that changes in the risk-mix of the individual loans and changes in the risk of lending in particular regions explain the behavior.

Further research would be necessary to conclude with confidence that there are significant earnings to be realized through switching operations. An FMEC can find out by trying.

Speculating is the fifth source of earnings listed for the FMEC. To speculate successfully, the Corporation would have to succeed in making net additions to its inventories when mortgage interest rates were high and net reductions when they were low. Short-term sources of funds could be used to finance changes in inventory holdings.

It is not considered easy to be a successful speculator in bonds and stocks. Is it reasonable, therefore, to expect an FMEC to be a successful speculator in residential mortgages? While not pretending to be able to answer the question, two observations can be made.

For the first, we return to Guttentag's hypothesis about mortgage yields referred to in Chapter 6. Guttentag reasons as follows. The demand for housing is relatively stable compared to demands that give rise to other forms of capital investment. As a result, pressures for interest rate changes tend to originate in the bond market. They are transmitted to the mortgage market, but there is a lag, because the transmission process depends entirely upon primary lending activities. There is no switching activity. Because of the personal nature of the mortgage origination process, lenders do not change their interest rates with every minor change in bond yields, but rather respond to changes that "prove out over time". Therefore, "the transmission process takes time and mortgage yields lag".⁴ Movements in

³ The maximum difference between the monthly averages for the Montreal and Toronto CMHC field offices for the same type of loan in the same two-year period occurred in the same month, and was even higher at 0.55 percent. See *Table A-18*.

⁴ J. M. Guttentag, "The Behavior of Residential Mortgage Yields Since 1951" in Guttentag and Cogan (eds.), *Essays in Interest Rates*, Vol 1, National Bureau of Economic Research, General Series, No. 88 (New York: Columbia University Press, 1969), p. 31.

bond yields thus might be found to foretell movements in mortgage rates with sufficient frequency to make speculation profitable.

For the second observation, we revert to Chapter 1. There it was suggested that banks restrict their mortgage lending in times of tight money because it is profitable for them to do so. It was also observed that during tight money periods life insurance companies face increased demands for policy loans which are mandatory for them to meet. Thus, tight money reduces the activity of two major multi-purpose investors. If money is tight because non-residential investment is high, trust companies, as multi-purpose investors, may take the opportunity to stock their bond portfolios. In times of tight money, there would appear to be an unusual gap to be filled in the residential mortgage market. Because profits are to be made by originating loans for sale and keeping the servicing, lending institutions could probably be found who were willing to offer new mortgages for sale.

These circumstances may provide more than usual opportunity for successful speculation by a single-purpose investor. The new practice of originating NHA-insured mortgages for five years, however, limits the change in price that can occur as a result of given changes in interest rates, and lowers the period in which the assets must be turned over in speculating. In 1971, 90 percent of loans originated by approved lenders under the NHA for housing for owner occupancy were renegotiable term mortgages.⁵

The sixth source of earnings listed for the FMEC is carrying inventories of residential mortgages. In this function, the Corporation in effect can be regarded as a loan company which does not originate or service its own mortgages. Costs of acquiring (and disposing of) inventories are costs of providing transactions services. Servicing fees characteristically are about three-eighths of one percent of the outstanding balance for packages of single-family housing loans and one-quarter of one percent or one-eighth of one percent for multi-family housing loans. (Part of this cost would be incurred by the FMEC if it did its own servicing.) Reference to the mortgage yields and corporate bond yields in *Table A-17* will indicate roughly the margins to be realized. This is likely to be the largest single source of earnings of the FMEC.

The seventh source of earnings is income from liquid and other non-mortgage investments. It will be of secondary importance, especially if short-term financing is used to handle inventory changes.

5. Effects on Supply of Mortgage Funds

The primary reason for proposing that an FMEC be established is to improve the private supply of residential mortgage funds in respect to both its potential size and its stability. The contributors to this volume have indicated several ways in which an FMEC might increase the capacity of the private sector to supply mortgage funds.

In Chapter 4, it was suggested that some other trust companies with

⁵ Central Mortgage and Housing Corporation, *Canadian Housing Statistics — 1971* (Ottawa: CMHC, 1972), p. 22.

higher mortgage/asset ratios in their company and guaranteed funds might be able to follow the lead of the Royal Trust and establish open-end funds similar to the M Fund. It was observed that there is a growing tendency for life insurance companies to establish segregated funds of one type or another, and that an FMEC (RMMC) might make it feasible to offer a more attractive redemption feature should mortgage funds be established. In the Interview Survey, fourteen of forty companies indicated that they would increase their proportion of assets held in mortgages if they could borrow from an FMEC (question no. 26). Ten companies replied that if they could sell mortgages to an FMEC, they would increase the proportion of their assets held in mortgages (question no. 29). Trust and loan companies dominated the positive replies.

Finally, in Chapter 5, a conjectural but plausible estimate was prepared which indicated that trustee pension funds might be induced by the presence of an FMEC to increase their mortgage investment by some \$120 million at their 1972 scale of operations and rate of growth, rising to an increase of nearly \$200 million by 1976.

The ability of an FMEC to make speculative profits affects the feasibility of making it a private enterprise. It does not automatically follow, however, that successful speculation would have the effect of reducing any short-term instability in the private supply of mortgage funds. Whether this would happen depends upon the nature of the forces of switching which exist between the residential mortgage market and other components of the capital market, notably the bond market. If the forces are strong and operate quickly, increased purchasing of mortgages by the FMEC in times of tight money may merely call forth increased selling of existing mortgages on the part of lending institutions which wish to substitute bonds for mortgages because of a change in the relative attractiveness of the two types of investment. New mortgage lending would not be increased as a result of the increased activity of the FMEC.⁶

There are at least two reasons for believing that the forces of switching may not be sufficiently strong to preclude some positive effect from successful speculation by the FMEC. The first is that loans with interest rates below the prevailing rate must be sold at a discount. Thus, if interest rates have risen, selling existing mortgage holdings involves taking book losses, assuming loans were originated at par. Any reluctance to take book losses would inhibit switching from mortgages to bonds. As observed in Chapter 4, the legal borrowing capacity of trust and loan companies is governed by the amount of the excess of their assets over their liabilities. Taking book losses reduces their legal borrowing capacity. Selling mortgages at a discount then could require them to reduce their debt, if they had close to their legal maximum amount of debt outstanding. If they had less than the maximum as a matter of company policy, their reserve borrowing capacity, a form of liquidity, would be reduced. Because of the high levels of leverage

⁶ If this were the case, it should be noted that while the FMEC's operations would have less effect upon reducing supply instability in the mortgage market, they would have the effect of integrating the bond and mortgage markets more closely. From the standpoint of efficiency of the capital market as a whole, this is desirable.

characteristic of the trust and loan company business, one dollar of book losses reduces borrowing capacity by the order of \$15 or more. Some other investors might be deterred from switching by the simple fact that book losses are taken immediately, whereas the higher earnings from the operation are distributed over time.

Given time, however, the forces of switching may increase. Accounting practices may change. If the practice of amortizing book losses were to develop, for example, switching would be less inhibited by accounting procedure. Similarly, widespread adoption of the procedure of valuing mortgages on the basis of current yields in the original market would mean that book losses would be taken when interest rates rose, whether the loans were sold or not. There would then be no accounting impediment to switching. Already some investors value their fixed income securities on a market value basis, if the market values are readily available, for purposes of computing rate of return earned on their portfolios. In the Survey of Mortgage Investment by Trusteed Pension Funds conducted by the Project Team, twenty of forty-nine respondents indicated that this was their practice (see Appendix C, question no. 1). The continuous provision of quotations for standard classes of mortgages by an FMEC could become a basis for extending market value accounting to residential mortgages.

The accounting profession is not known for a high rate of change in its methods. On the other hand, the rate of change that occurs could be accompanied by a growing willingness on the part of sophisticated investors to accept losses in book value that are prerequisite to increasing long-run earnings.

A second form of market imperfection that may restrain switching is the need for major lending institutions to maintain a positive social posture. To be seen to be not only favoring other borrowers in new lending, but disposing of existing mortgage holdings as well, could stretch latent social antipathies toward large financial institutions to an activist point. A comprehensive, long-run, profit-maximizing strategy must take into account social attitudes and political propensities to cater to them.

The problem of maintaining a favorable social posture bears on another facet of the question of whether successful speculation by an FMEC would reduce the instability in the supply of mortgage funds. That is the question of the extent to which the FMEC's action in enlarging the supply of funds during periods of tight money will move the rate downward, thus limiting the scope for this activity. Consider the figure below:

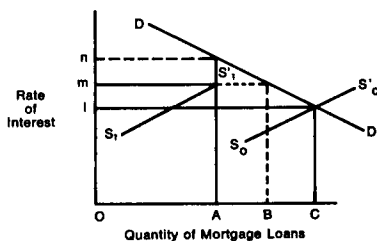


Figure 7-1

Let S_0S_0' be the institutional supply curve for residential mortgage funds during a period of neutral monetary policy. An amount of funds OC is loaned and borrowed at an interest rate of 1. Now suppose that non-residential capital formation increases, raising the demand for funds from lending institutions. For simplicity, we assume that the demand curve for residential mortgage funds remains constant. Because lending institutions find it attractive to finance the non-residential investment, their supply curve of mortgage funds shifts to the left to S_1S_1' . They lend an amount OA at an interest rate Om . This rate is less than they think the short-term traffic will bear, which is On . The lower rate is selected for social posture reasons. The result is that an amount AB could be supplied to the market without causing the rate to be lowered. Presumably an FMEC, whether publicly or privately owned, would wish to emphasize an increase in supply rather than invest at yields above the lending institutions' social posture rate.

III. CONCLUSION

In this postscript, we have tried to avoid making unwarranted claims about the magnitude of prospective benefits from an FMEC as provided for in Bill C-135. Extravagant claims tend to generate false expectations and eventual disappointment from which undesirable reactions can ensue. This is particularly so for the objective of reducing supply instability in the residential mortgage market. In any case, we do not see that large positive benefits must be expected to justify an FMEC. The risks associated with establishing it are low. At worst, it could prove to be only a modified loan company, and such companies play a constructive role in the economy. On the other hand, a flourishing FMEC would not only improve the residential mortgage market and the capital market as a whole; it would set a strong precedent for scrutinizing other government financial institutions with a view to turning them over to private enterprise.

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Appendix A

Background Data

by E. Sussman and Staff

Appendix A

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Table A-1

DWELLING STARTS AND COMPLETIONS, 1950-71

	<i>Starts</i>	<i>Completions</i>
1950	92,531	89,015
51	68,579	81,310
52	83,246	73,087
53	102,409	96,839
54	113,527	101,965
55	138,276	127,929
56	127,311	135,700
57	122,340	117,283
58	164,632	146,686
59	141,345	145,671
1960	108,858	123,757
61	125,577	115,608
62	130,095	126,682
63	148,624	128,191
64	165,658	150,963
65	166,565	153,037
66	134,474	162,192
67	164,123	149,242
68	196,878	170,993
69	210,415	195,826
1970	190,528	175,827
71	233,653	201,232

Source: CMHC.

Table A-2

EXPENDITURES ON NEW HOUSING BY SOURCE OF FINANCING, 1950-71
(\$ Millions)

	Public Funds Under Federal Legislation				Institutional Funds		Other Funds			
	Direct Expendi- ture	CMHC Loans	Other Loans	Total	NHA	Conven- tional	Total	Owners Equity	Other	Total
1951	43.1	86.5	9.8	139.4	130.0	58.1	188.1	225.1	229.5	782.1
52	52.9	64.2	7.4	124.5	125.2	67.4	192.6	284.0	279.2	880.3
53	39.5	100.7	9.0	149.2	173.0	86.7	259.7	361.4	397.7	1,168.0
54	18.5	86.3	8.5	113.3	338.7	120.9	459.6	292.2	445.1	1,310.2
55	25.7	23.3	9.9	58.9	563.3	197.9	761.2	312.8	542.2	1,675.1
56	30.8	16.3	8.9	56.0	564.1	254.8	818.9	344.9	465.2	1,685.0
57	40.0	59.8	8.8	108.6	286.1	256.6	542.7	218.0	624.1	1,493.4
58	41.1	334.5	8.5	384.1	447.6	275.9	723.5	282.8	519.5	1,909.9
59	31.7	309.1	8.0	348.8	410.1	338.5	743.6	382.8	356.1	1,831.3
1960	28.6	271.3	7.9	307.8	180.6	299.6	480.2	266.4	438.5	1,492.9
61	19.9	275.2	3.8	298.9	382.6	247.0	629.6	227.9	312.9	1,469.3
62	23.0	192.3	7.8	223.1	375.8	388.7	764.5	310.6	235.6	1,533.8
63	28.5	143.2	9.3	181.0	335.5	543.8	879.3	243.7	324.5	1,628.5
64	17.8	302.8	11.8	332.4	294.9	688.3	983.2	264.1	392.1	1,971.8
65	14.3	336.4	15.2	365.9	301.9	792.9	1,094.8	308.9	408.1	2,177.7
66	24.8	479.5	10.3	514.6	198.5	617.9	816.4	455.6	363.7	2,150.3
67	25.0	770.0	11.7	806.7	239.2	576.5	815.7	427.7	296.8	2,346.9
68	33.5	399.4	10.0	442.9	709.4	820.3	1,529.7	550.0	248.3	2,770.9
69	60.7	409.1	35.7	505.5	680.3	1021.7	1,702.0	556.3	575.1	3,338.9
1970	28.5	567.1	29.4	625.0	686.2	542.7	1,228.9	714.7	868.7	3,437.3
71	30.9	722.4	19.3	772.6	1360.6	714.3	2,074.9	891.4	638.6	4,377.5

Description: Total expenditures include construction costs, supplementary costs and the cost of land. The item "Owners Equity" includes the equities of owners or builders on dwellings financed with mortgage loans from public funds or from institutional lenders. Equities on dwellings financed with mortgage loans from lenders other than lending institutions or by loans other than mortgages, or equities on dwellings fully financed by their owners, are included under "Other Funds". Loans and grants made by provincial and municipal governments for new housing construction are also included under this item. Under "Public Funds" the item "Direct Expenditures" represents disbursement on residential construction undertaken by Federal Departments for their employees. "CMHC loans" include loans under Section 40 to supplement those made by private lenders, and loans made for housing low income groups under such programmes as limited dividend and non-profit corporations, and loans made to provincial housing corporations. "Other" loans made out of public funds include loans made under the Veterans' Land Act and the Farm Credit Act.

Table A-3

PERCENTAGE DISTRIBUTION OF EXPENDITURES ON NEW HOUSING
BY SOURCE OF FINANCING, 1950-71

	<i>Public Funds Under Federal Legislation</i>				<i>Institutional Funds</i>			<i>Other Funds</i>		
	<i>Direct Expendi- ture</i>	<i>CMHC Loans</i>	<i>Other Loans</i>	<i>Total</i>	<i>NHA</i>	<i>Conven- tional</i>	<i>Total</i>	<i>Owners Equity</i>	<i>Others</i>	<i>Total</i>
1951	5.5	11.1	1.3	16.6	16.4	7.4	24.0	28.8	29.3	100.0
52	6.0	7.3	0.8	14.1	14.2	7.7	21.9	32.3	31.7	100.0
53	3.4	8.6	0.8	12.8	14.8	7.4	22.2	30.9	34.1	100.0
54	1.4	6.6	0.6	8.6	25.9	9.2	35.1	22.3	34.0	100.0
55	1.5	1.4	0.6	3.5	33.6	11.8	45.4	18.7	32.4	100.0
56	1.8	1.0	0.5	3.3	33.5	15.1	48.6	20.5	27.6	100.0
57	2.7	4.0	0.6	7.3	19.2	17.1	36.3	14.6	41.8	100.0
58	2.2	17.5	0.5	20.1	23.4	14.4	37.8	14.8	27.2	100.0
59	1.7	16.9	0.4	19.0	22.4	18.2	40.6	20.9	19.5	100.0
1960	1.9	18.2	0.5	20.6	12.1	20.1	32.2	17.8	29.4	100.0
61	1.4	18.7	0.3	20.4	26.0	16.8	43.8	15.5	21.3	100.0
62	1.5	12.5	0.5	14.5	24.5	25.3	49.8	20.3	15.4	100.0
63	1.8	8.8	0.6	11.2	20.6	33.3	53.9	15.0	19.9	100.0
64	0.9	15.4	0.6	16.9	15.0	34.9	49.9	13.3	19.9	100.0
65	0.7	15.4	0.7	16.8	13.9	36.4	50.3	14.2	18.7	100.0
66	1.2	22.3	0.5	24.0	9.2	28.7	37.9	21.2	16.9	100.0
67	1.1	32.8	0.5	34.4	10.2	24.6	34.8	18.2	12.6	100.0
68	1.2	14.4	0.4	16.0	25.6	29.6	55.2	19.8	9.0	100.0
69	1.8	12.3	1.1	15.2	20.4	30.6	51.0	16.6	17.2	100.0
1970	0.8	16.5	0.9	18.2	20.0	15.8	35.8	20.8	25.2	100.0
71	0.7	16.5	0.4	17.6	31.1	16.3	47.4	20.4	14.6	100.0

Table A-4

MORTGAGE LOANS OUTSTANDING WITH GOVERNMENT AGENCIES,
LENDING INSTITUTIONS, AND OTHER INVESTORS, 1950-71

	<i>Governments</i>	<i>Lending Institutions</i>	<i>Others</i>	<i>Total</i>
1950	459	1303	1368	3130
51	595	1520	1666	3781
52	674	1693	1914	4281
53	768	1936	1725	4429
54	850	2348	1904	5102
55	868	3025	2387	6280
56	893	3723	3394	8010
57	973	4112	3321	8406
58	1337	4657	3334	9323
59	1681	5234	3241	10156
1960	1995	5650	3704	11349
61	2229	6219	5095	13543
62	2410	7041	5325	14776
63	2531	7911	5789	16231
64	2823	9091	6278	17703
65	3222	10502	6992	20716
66	3879	11454	7655	22988
67	4769	12282	8632	25683
68	5267	13447	8226	26940
69	5497	14930	8810	29237
1970	6171	16216	8910	31297
71	7038	* *		

Sources: Compilations and estimates by CMHC.

Table A-5

BOND DEBT OUTSTANDING, 1952-71

	<i>Municipal</i>	<i>Corporate & Institutional</i>	<i>Provincial</i>	<i>Federal</i>	<i>Total</i>
1952	1,547	3,406	3,292	15,186	23,431
53	1,729	3,780	3,567	15,637	24,713
54	1,969	4,263	3,863	15,466	25,561
55	2,203	4,611	4,073	16,000	26,887
56	2,427	5,410	4,616	15,234	27,687
57	2,710	6,379	5,169	15,165	29,423
58	3,063	6,964	5,786	16,416	32,229
59	3,370	7,093	6,366	17,135	33,964
1960	3,740	7,511	6,855	17,747	35,853
61	4,058	7,441	8,211	18,636	38,346
62	4,363	7,991	9,051	19,448	40,853
63	4,723	8,564	10,240	20,276	43,803
64	5,109	9,411	11,182	20,733	46,435
65	5,398	10,793	11,946	20,681	48,818
66	5,772	11,870	13,534	21,111	52,287
67	6,115	12,860	15,634	22,011	56,620
68	6,366	13,790	17,621	23,556	61,333
69	6,644	14,822	19,676	23,902	65,044
1970	6,946	16,302	21,736	25,746	70,730
71	7,221	18,135	23,931	28,277	77,564

Description: Total volume of bonds outstanding, denominated in Canadian or foreign currency, as estimated by the Bank of Canada. Reprinted from various issues of the Bank of Canada Statistical Summaries.

Table A-6

MORTGAGE LOANS OUTSTANDING OF LENDING INSTITUTIONS
AND TRUSTEED PENSION FUNDS, 1950-71

(\$ Millions)

<i>Lending Institutions</i>							
	<i>Life Insurance Com- panies</i>	<i>Chartered Banks</i>	<i>Trust Com- panies</i>	<i>Loan Com- panies</i>	<i>Other</i>	<i>Total</i>	<i>Trusteed Pension Funds</i>
1950	901	—	113	265	24	1,303	—
51	1,077	—	128	289	26	1,520	—
52	1,214	—	136	314	29	1,693	—
53	1,402	—	149	352	33	1,936	—
54	1,658	74	178	396	42	2,348	—
55	2,016	294	228	444	43	3,025	—
56	2,408	493	268	497	57	3,723	120
57	2,660	586	275	521	70	4,112	179
58	2,875	790	343	569	80	4,657	231
59	3,140	968	409	629	88	5,234	279
1960	3,412	971	472	698	97	5,650	299
61	3,710	953	622	815	119	6,219	341
62	4,142	921	845	989	144	7,041	414
63	4,560	885	1,103	1,188	175	7,911	479
64	5,094	846	1,449	1,492	210	9,091	542
65	5,662	810	1,927	1,827	276	10,502	623
66	6,248	778	2,169	1,949	310	11,454	676
67	6,636	840	2,414	2,073	319	12,282	724
68	7,107	1,043	2,727	2,235	335	13,447	776
69	7,490	1,325	3,264	2,508	343	14,930	863
1970	7,675	1,457	3,829	2,868	387	16,216	1,022
71	7,771 ^e	2,304	4,463 ^e	3,142 ^e	400 ^e	18,080	1,194 ^e

Description: Total mortgage loans held by various lenders as estimated by CMHC via annual surveys. Includes NHA-insured mortgage loans, and conventional mortgage loans. Includes also mortgage loans secured by non-residential real estate.

Table A-7

TOTAL ASSETS OF LENDING INSTITUTIONS
AND TRUSTEED PENSION FUNDS, 1950-71
(\$ Millions)

	<i>Lending Institutions</i>						<i>Trusteed Pension Funds</i>	
	<i>Life Insurance Companies</i>	<i>Chartered Banks</i>	<i>Trust Companies</i>	<i>Loan Companies</i>	<i>Other</i>	<i>Total</i>		<i>Total</i>
1950	3,972	9,443	424	405	310	14,554	—	14,554
51	4,223	9,458	446	423	318	14,868	—	14,868
52	4,497	10,128	466	446	336	15,873	—	15,873
53	4,889	10,656	474	464	350	16,833	—	16,833
54	5,180	11,433	624	532	370	18,139	—	18,139
55	5,642	12,690	706	598	392	20,028	—	20,028
56	6,035	13,408	740	644	414	21,241	2,000	23,241
57	6,544	14,244	772	694	430	22,684	2,460	25,144
58	7,066	15,840	954	771	463	25,094	2,791	27,885
59	7,491	15,784	1,058	844	464	25,641	3,200	28,841
1960	8,040	16,917	1,302	914	495	27,668	3,583	31,251
61	8,660	19,153	1,585	1,090	526	31,014	4,036	35,050
62	9,381	20,272	1,894	1,300	548	33,395	4,530	37,925
63	10,188	22,094	2,321	1,544	583	36,730	5,127	41,857
64	10,893	23,872	2,860	1,936	626	40,187	5,766	45,953
65	11,699	25,875	3,439	2,426	676	44,115	6,541	50,656
66	12,358	27,773	3,923	2,570	701	47,325	7,250	54,575
67	13,121	31,649	4,353	2,772	757	52,652	8,068	60,720
68	13,841	36,699	4,980	2,978	839	59,337	8,972	68,309
69	14,461	42,578	5,771	3,292	787	66,889	10,003	76,892
1970	15,218	47,307	6,564	3,778	857	73,724	11,059	84,783
71	15,978	54,428	7,401	4,191	930	82,928	12,200	95,128

Source: Compiled by CMHC from various published sources.

Table A-8

MORTGAGE LOANS OUTSTANDING AS A PERCENT OF TOTAL ASSETS
OF LENDING INSTITUTIONS AND TRUSTEED PENSION FUNDS, 1950-71

	<i>Lending Institutions</i>						<i>Trusteed Pension Funds</i>	
	<i>Life Insurance Companies</i>	<i>Chartered Banks</i>	<i>Trust Companies</i>	<i>Loan Companies</i>	<i>Other</i>	<i>Total</i>		<i>Total</i>
1950	22.7	—	26.7	65.4	7.7	9.0	—	8.9
51	25.5	—	28.7	68.3	8.2	10.2	—	10.2
52	27.0	—	29.2	70.4	8.6	10.7	—	10.7
53	28.7	—	31.4	75.9	9.4	11.5	—	11.5
54	32.0	0.7	28.5	74.4	11.4	12.9	—	12.9
55	35.7	2.3	32.3	74.3	11.0	15.1	—	15.1
56	39.9	3.7	36.2	77.2	13.8	17.5	6.0	16.5
57	40.7	4.1	35.6	75.1	16.3	18.1	7.3	17.1
58	40.7	4.9	40.0	73.8	17.3	18.6	8.3	17.5
59	41.9	6.1	38.6	74.5	19.0	20.4	8.7	19.1
1960	42.4	5.7	36.3	76.4	19.6	20.4	8.3	19.0
61	42.8	4.9	39.2	74.8	22.6	20.0	8.5	18.7
62	44.1	4.5	44.6	76.1	26.3	21.1	9.1	19.7
63	44.8	4.0	47.5	76.9	30.0	21.5	9.3	20.0
64	46.8	3.5	50.6	77.1	33.6	22.6	9.4	21.0
65	48.4	3.1	56.0	75.3	40.8	23.8	9.5	22.0
66	50.7	2.8	55.3	75.8	44.2	24.2	9.3	22.2
67	50.9	2.7	55.5	74.8	42.1	23.3	9.0	21.4
68	51.4	2.9	54.7	75.1	39.9	22.7	8.7	20.8
69	51.8	3.1	56.6	76.2	43.6	22.3	8.6	20.5
1970	50.4	3.1	58.3	75.9	45.2	22.0	9.2	20.3
71	48.6	4.2	60.3	75.0	43.0	21.8	9.8	20.3

Table A-9

MORTGAGE LOANS OUTSTANDING AND TOTAL ASSETS OF
11 TRUST COMPANIES AND 8 LOAN COMPANIES, BY COMPANY, 1970

<i>Lending Institution</i>	<i>Mortgages \$ Millions</i>	<i>Total Assets \$Millions</i>	<i>Mortgages as a % of Total Assets</i>
Trust Companies			
1. Royal	650	1,417	46.0%
2. Canada Permanent	493	683	72.2
3. Guaranty	417	653	64.0
4. National	280	558	50.2
5. Montreal	210	496	42.3
6. Victoria and Grey	350	444	79.0
7. Canada	359	467	77.0
8. Waterloo Trust and Savings	107	192	55.7
9. Crown	78	113	69.0
10. Sterling	44	56	78.6
11. Industrial Mortgage	14	23	70.0
11 Companies	3,002	5,102	59.0
Loan Companies			
1. Canada Permanent Mortgage	609	775	78.6
2. Huron and Erie Mortgage	523	710	73.7
3. Credit Foncier Franco-Canadien	217	258	84.1
4. Kinross Mortgage	291	303	96.0
5. Royal Trust Mortgage	171	203	56.4
6. Eastern Canada Savings and Loan	155	173	89.6
7. Nova Scotia Savings and Loan	79	86	92.0
8. Lambton Loan and Investment	32	39	82.1
8 Companies	2,077	2,547	81.5

Source: Compiled by CMHC.

Table A-10

MORTGAGE LOANS APPROVED¹ UNDER THE HOUSING ACTS
BY APPROVED LENDERS AND CMHC, 1935-71
\$ Millions

				Percent of Total	
	Approved Lenders	CMHC	Total	Approved Lenders	CMHC
DHA ²					
1935-1938	19,619	—	19,619	100.00	—
NHA, 1938					
1938-1945	67,519	—	67,519	100.00	—
NHA, 1944					
1945	22,511	—	22,511	100.00	—
46	37,628	18,323	55,951	67.25	32.75
47	52,120	11,100	53,230	97.91	2.09
48	96,363	7,928	104,291	92.39	7.61
49	111,979	28,851	140,830	79.51	20.49
1950	259,306	25,181	284,487	91.14	8.86
51	113,584	10,037	123,621	91.88	8.12
52	201,595	47,489	249,084	80.93	19.07
53	236,156	54,370	290,526	81.28	18.72
54	55,239	1,074	56,313	98.09	1.91
Total	1,185,032	193,802	1,378,834	85.94	14.06
NHA, 1954					
1954	378,198	20,446	398,644	94.87	5.13
55	600,658	16,518	617,176	97.32	2.68
56	387,497	19,745	407,242	95.15	4.85
57	260,976	233,012	493,988	52.83	47.17
58	510,011	372,913	882,924	57.76	42.24
59	283,008	343,159	626,167	45.19	54.81
1960	231,903	161,089	392,992	59.00	41.00
61	439,386	272,902	712,288	61.68	38.32
62	383,852	186,654	570,506	67.28	32.72
63	364,500	319,879	684,379	53.25	46.75
64	330,584	397,069	727,653	45.43	54.57
65	308,591	467,057	775,648	39.78	60.22
66	134,580	536,682	671,262	20.04	79.96
67	340,959	674,068	1,015,027	33.59	66.41
68	798,754	443,301	1,242,055	64.30	35.70
69	650,290	546,938	1,197,228	54.31	45.69
1970	816,681	903,408	1,720,089	47.47	52.53
71	1,589,944	676,255	2,266,169	70.15	29.85
Total	8,810,372	6,591,065	15,401,437	57.20	42.80
Total 1935-71	10,082,542	6,784,867	16,867,409	59.77	40.23

¹ Data are net.² Dominion Housing Act.

Source: CMHC.

Table A-11

MORTGAGE LOANS APPROVED ON NEW RESIDENTIAL CONSTRUCTION
BY LENDING INSTITUTIONS AND CMHC, 1950-71

(\$ Millions)

	Lending Institutions					Total	CMHC	Total
	Life Insurance Com- panies	Chartered Banks	Trust Com- panies	Loan Com- panies	Other			
1950	269	—	8	28	4	310	25	335
51	208	—	7	18	5	237	10	247
52	262	—	7	30	4	303	47	350
53	320	—	10	39	6	374	54	428
54	395	158	27	55	9	645	20	665
55	428	326	56	55	10	874	17	891
56	417	158	46	49	10	680	20	700
57	251	173	37	44	12	517	233	750
58	353	300	67	74	16	810	373	1183
59	352	175	64	53	6	651	343	994
1960	379	1	88	73	8	549	161	710
61	495	—	190	83	18	786	273	1059
62	533	—	199	107	24	862	187	1049
63	616	—	250	152	20	1038	320	1358
64	647	9	273	193	42	1165	397	1562
65	690	6	316	156	54	1222	467	1689
66	459	—	144	120	42	765	537	1302
67	494	128	303	137	40	1101	674	1775
68	614	333	528	222	98	1795	443	2238
69	379	284	650	268	109	1690	547	2237
1970	177	379	545	200	96	1397	903	2300
71	353	851	742	402	123	2471	676	3147

Description: NHA-insured and conventional mortgage loans approved for new single-family homes and apartments. Data compiled via surveys conducted by CMHC. Data are net.

Table A-12

MORTGAGE LOANS APPROVED ON EXISTING RESIDENTIAL PROPERTY
BY LENDING INSTITUTIONS AND CMHC, 1950-71
(\$ Millions)

	Lending Institutions					Total	CMHC	Total
	Life Insurance Companies	Chartered Banks	Trust Companies	Loan Companies	Other			
1950	56	—	21	37	1	115	—	115
51	54	—	20	37	3	114	—	114
52	51	—	19	44	3	118	—	118
53	48	—	24	41	3	117	—	117
54	58	—	32	49	5	144	—	144
55	76	—	38	60	8	182	—	182
56	78	—	31	58	9	176	—	176
57	57	—	37	46	10	150	—	150
58	79	—	55	63	11	208	—	208
59	95	—	55	57	9	216	—	216
1960	79	—	58	70	14	221	—	221
61	103	—	85	89	23	300	—	300
62	118	—	106	109	25	358	—	358
63	127	—	156	123	25	430	—	430
64	164	—	243	189	44	640	—	640
65	198	—	296	211	45	749	20	769
66	126	—	191	132	21	471	19	490
67	135	102	251	151	17	655	42	697
68	73	97	256	132	15	572	49	621
69	54	81	354	153	30	672	59	731
1970	39	114	347	185	38	723	31	754
71	74	253	611	385	36	1359	37	1396

Description: NHA-insured and conventional mortgage loans approved for existing single-family homes and apartments. Data compiled via surveys conducted by CMHC. Data are net.

Table A-13

MORTGAGE LOANS APPROVED ON RESIDENTIAL PROPERTY
BY LENDING INSTITUTIONS AND CMHC, 1950-71
(\$ Millions)

	Lending Institutions					Total	CMHC	Total
	Life Insurance Companies	Chartered Banks	Trust Companies	Loan Companies	Other			
1950	325	—	29	65	5	425	25	450
51	262	—	27	55	8	351	10	361
52	313	—	26	74	7	421	47	468
53	368	—	34	80	9	491	54	545
54	453	158	59	104	14	789	22	811
55	504	326	94	115	18	1056	17	1073
56	495	158	77	107	19	856	20	876
57	308	173	74	90	22	667	233	900
58	432	300	122	137	27	1018	373	1391
59	447	175	119	110	15	867	343	1210
1960	458	1	146	143	22	770	161	931
61	598	—	275	172	41	1086	273	1359
62	651	—	305	216	49	1220	187	1407
63	743	—	406	275	45	1468	320	1788
64	811	9	516	382	86	1805	397	2202
65	888	6	612	367	99	1971	487	2458
66	585	—	335	252	63	1236	556	1792
67	629	230	554	288	57	1756	716	2472
68	687	430	784	354	113	2367	492	2859
69	433	365	904	421	139	2362	606	2968
1970	216	493	892	385	134	2120	934	3054
71	426	1,104	1,354	787	159	3830	713	4543

Description: Mortgage loans approved under NHA and in the conventional sector for both new and existing single-family homes and apartments. Data compiled via surveys conducted by CMHC.

Table A-14

**MORTGAGE LOANS APPROVED ON RESIDENTIAL PROPERTY
BY LENDING INSTITUTIONS AND CMHC AND NEW ISSUES OF
CANADIAN DOLLAR BONDS AND STOCKS, 1952-71**

(\$ Millions)

		<i>Bonds and Stocks</i>							<i>Total</i>
<i>Mortgages</i>		<i>Gov't. Guar. Bonds</i>	<i>Prov. Bonds</i>	<i>Muni- cipal Bonds</i>	<i>Cor- porate Bonds</i>	<i>Other Bonds</i>	<i>Pref. Stock</i>	<i>Com- mon Stock</i>	
1952	468	827	355	189	419	31	29	223	2,073
53	545	2,033	251	221	416	3	83	206	3,213
54	811	3,400	380	340	598	39	92	147	4,996
55	1,073	1,370	371	299	688	52	171	367	3,318
56	876	1,527	420	251	812	13	190	513	3,726
57	900	2,602	632	287	802	19	132	428	4,902
58	1,391	9,200	559	355	795	15	45	287	11,256
59	1,210	2,893	562	395	432	35	99	349	4,765
1960	931	2,665	684	461	636	38	57	185	4,726
61	1,359	3,429	1,143	488	637	49	61	396	6,203
62	1,407	3,307	1,201	451	648	28	92	259	5,986
63	1,788	3,301	1,105	584	753	41	165	249	6,198
64	2,202	3,383	1,087	553	1,066	30	116	409	6,644
65	2,458	2,874	1,197	469	1,363	83	255	293	6,534
66	1,792	4,159	1,770	519	1,027	52	238	389	8,154
67	2,472	3,694	2,098	616	1,266	81	221	268	8,244
68	2,859	6,329	1,907	421	1,039	101	147	445	10,389
69	2,968	6,424	1,873	460	1,179	131	163	849	11,079
1970	3,054	4,359	2,959	615	1,803	145	130	244	10,255
71	4,543	5,208	2,959	583	2,322	112	141	176	11,501

Description: Mortgage loan approvals under NHA and in the conventional mortgage sector for both new and existing residential real estate. Data are gross. Data are for gross new security issues delivered.

Table A-15

**PERCENTAGE DISTRIBUTION OF MORTGAGE LOANS APPROVED
ON RESIDENTIAL PROPERTY BY LENDING INSTITUTIONS AND CMHC
AND NEW ISSUES OF CANADIAN DOLLAR BONDS AND STOCKS, 1952-71**

		<i>Gross New Security Issues Delivered</i>							<i>Total</i>
<i>Total Residential Mortgage Loan Approvals</i>		<i>Gov't. Guar. Bonds</i>	<i>Prov. Bonds</i>	<i>Muni- cipal Bonds</i>	<i>Cor- porate Bonds</i>	<i>Other Bonds</i>	<i>Pref. Stock</i>	<i>Com- mon Stock</i>	
1952	18.4	32.6	14.0	7.4	16.5	1.2	1.1	8.8	100.
53	14.5	54.1	6.7	5.9	11.1	.1	2.2	5.5	100.
54	14.0	58.6	6.5	5.9	10.3	.7	1.6	2.5	100.
55	24.4	31.2	8.5	6.8	15.7	1.2	3.9	8.4	100.
56	19.0	33.2	9.1	5.5	17.6	.3	4.1	11.2	100.
57	15.5	44.9	10.9	5.0	13.8	.3	2.3	7.4	100.
58	11.0	72.7	4.4	2.8	6.3	.1	.4	2.3	100.
59	20.3	48.4	9.4	6.6	7.2	.6	1.7	5.8	100.
1960	16.5	47.1	12.1	8.2	11.2	.7	1.0	3.3	100.
61	17.9	45.2	15.1	6.4	8.4	.7	.8	5.4	100.
62	19.0	44.6	16.2	6.1	8.7	.4	1.3	3.7	100.
63	22.4	41.3	13.8	7.3	9.4	.5	2.1	3.1	100.
64	24.8	38.2	12.3	6.3	12.0	.3	1.3	4.8	100.
65	27.2	31.8	13.2	5.2	15.2	.9	2.9	3.6	100.
66	17.9	41.6	17.8	5.2	10.5	.5	2.5	4.1	100.
67	22.9	34.2	19.4	5.7	11.9	.8	2.0	3.0	100.
68	21.5	47.6	14.4	3.2	7.8	.8	1.1	3.6	100.
69	21.1	45.7	13.3	3.3	8.4	.9	1.2	6.0	100.
1970	22.9	32.8	22.2	4.6	13.5	1.2	1.0	1.8	100.
71	29.0	32.5	18.4	3.6	14.5	.7	.9	1.1	100.

Table A-16

MORTGAGE AND BOND YIELDS, AND YIELD MARGINS OVER LONG-TERM CANADAS, 1951-71
(Percent)

	Yields						Yield Margin over Long-term Canadas				
	Mortgages			Bonds			Mortgages			McLeod, Young, Weir	
	NHA		Conven- tional	Long- Term Canada	McLeod, Young, Weir		NHA		Conven- tional	Bonds	
	Home ownership	Rental			20 Corporates	40	Home ownership	Rental		20 Corporates	40
1951	5.29	5.46	3.21	3.92	3.94	2.08	2.25	0.71	0.73		
52	5.60	5.77	3.54	4.27	4.32	2.06	2.23	0.73	0.78		
53	5.75	5.97	3.77	4.43	4.41	1.98	2.20	0.66	0.64		
54	5.54	6.01	3.25	4.00	3.85	2.29	2.76	0.75	0.60		
55	5.27	5.88	3.19	3.88	3.73	2.08	2.69	0.69	0.54		
56	5.45	6.23	3.61	4.49	4.48	1.84	2.62	0.88	0.87		
57	6.00	6.85	4.12	5.29	5.26	1.88	2.73	1.17	1.14		
58	6.00	6.80	4.12	4.95	4.95	1.88	2.68	0.83	0.83		
59	6.06	6.90	5.06	5.61	5.71	1.00	1.84	0.55	0.65		
1960	6.75	7.18	5.20	5.69	5.76	1.55	1.98	0.49	0.56		
61	6.70	7.00	5.06	5.45	5.53	1.64	1.94	0.39	0.47		
62	6.50	6.97	5.11	5.43	5.47	1.39	1.86	0.32	0.36		
63	6.35	6.97	5.09	5.42	5.47	1.26	1.88	0.33	0.38		
64	6.25	6.97	5.19	5.51	5.55	1.06	1.78	0.32	0.36		
65	6.25	7.02	5.20	5.67	5.63	1.05	1.82	0.47	0.43		
66	6.83	7.63	5.68	6.50	6.41	1.15	1.95	0.82	0.73		
67	7.44	7.40	8.07	5.90	7.02	6.92	1.54	1.50	2.17	1.12	
68	8.64	8.62	9.07	6.73	7.85	7.77	1.91	1.89	2.34	1.12	
69	9.40	9.38	9.84	7.56	8.70	8.65	1.84	1.82	2.28	1.14	
1970	10.07	10.20	10.45	7.97	9.23	9.23	2.10	2.23	2.48	1.26	
71	9.04	9.43	9.43	6.95	8.41	8.29	2.09	2.48	2.48	1.46	

Table A-17

MORTGAGE AND BOND YIELDS, AND YIELD MARGINS OVER LONG-TERM CANADAS, MONTHLY, 1965-71
(Percent)

		Yields					Yield Margin Over Long-Term Canadas				
		Mortgages			Bonds		Mortgages			McLeod, Young & Weir	
		NHA		Conven- tional	McLeod, Young & Weir		NHA		Conven- tional	Bonds	
		Home- Ownership	Rental		Long- Term	20 Corporate	40	Home- Ownership	Rental	20 Corporate	40
1965	Jan.	6.25		6.90	4.96	5.41	5.42	1.29	1.94	.45	.46
	Feb.	6.25		6.85	5.03	5.38	5.41	1.22	1.82	.35	.84
	Mar.	6.25		6.82	5.06	5.48	5.48	1.19	1.76	.42	.42
	Apr.	6.25		6.82	5.05	5.49	5.48	1.20	1.77	.44	.43
	May	6.25		6.83	5.12	5.52	5.52	1.13	1.71	.40	.40
	June	6.25		6.83	5.16	5.64	5.62	1.09	1.67	.48	.46
	July	6.25		7.02	5.28	5.74	5.74	.97	1.74	.46	.46
	Aug.	6.25		7.13	5.35	5.77	5.76	.90	1.78	.42	.41
	Sept.	6.25		7.15	5.32	5.84	5.85	.93	1.83	.52	.53
	Oct.	6.25		7.25	5.37	5.84	5.86	.88	1.88	.47	.49
	Nov.	6.25		7.29	5.40	5.90	5.91	.85	1.89	.50	.51
	Dec.	6.25		7.40	5.40	6.03	6.00	.85	2.00	.63	.60
1966	Jan.	6.75		7.38	5.41	5.99	5.96	1.34	1.97	.58	.55
	Feb.	6.75		7.45	5.61	6.15	6.12	1.14	1.84	.54	.51
	Mar.	6.75		7.46	5.58	6.19	6.17	1.17	1.88	.61	.59
	Apr.	6.75		7.48	5.60	6.23	6.20	1.15	1.88	.63	.60
	May	6.75		7.51	5.61	6.26	6.22	1.14	1.90	.65	.61
	June	6.75		7.57	5.66	6.26	6.24	1.09	1.91	.60	.58
	July	6.75		7.68	5.74	6.42	6.40	1.01	1.94	.68	.66
	Aug.	6.75		7.80	5.94	6.76	6.72	.81	1.86	.82	.78
	Sept.	6.75		7.84	5.75	6.75	6.71	1.00	2.09	1.00	.96
	Oct.	6.75		7.87	5.71	6.74	6.70	1.04	2.16	1.03	.99
	Nov.	7.25		7.91	5.91	6.82	6.75	.84	2.00	.91	.84
	Dec.	7.25		7.95	5.76	6.77	6.72	0.99	2.19	1.01	.96

Table A-17 (Cont'd.)

		Yields					Yield Margin Over Long-Term Canadas					
		Mortgages			Bonds			Mortgages			McLeod, Young & Weir	
		NHA		Conven- tional	Long- Term	McLeod, Young & Weir		NHA		Conven- tional	Bonds	
		Home- Ownership	Rental			20 Corporate	40	Home- Ownership	Rental		20 Corporate	40
1967	Jan.		7.25	7.93	5.60	6.55	6.46		1.65	2.33	.95	.86
	Feb.		7.25	7.89	5.64	6.53	6.43		1.61	2.25	.89	.79
	Mar.		7.25	7.83	5.48	6.56	6.42		1.77	2.35	1.08	.94
	Apr.		7.00	7.80	5.56	6.64	6.50		1.44	2.24	1.08	.94
	May		7.00	7.77	5.72	6.85	6.75		1.28	2.05	1.13	1.03
	June		7.00	7.88	5.87	6.99	6.91		1.13	2.01	1.12	1.04
	July		7.25	8.02	5.88	7.01	6.92		1.37	2.14	1.13	1.04
	Aug.		7.25	8.05	5.99	7.15	7.05		1.26	2.06	1.16	1.06
	Sept.		7.25	8.10	6.19	7.37	7.28		1.06	1.91	1.18	1.09
	Oct.		7.79	8.49	6.36	7.49	7.40		1.43	2.13	1.13	1.04
	Nov.		7.93	8.52	6.41	7.53	7.46		1.52	2.11	1.12	1.05
	Dec.		7.90	8.52	6.54	7.52	7.47		1.36	1.98	.98	.93
1968	Jan.	8.16	8.32	8.83	6.54	7.49	7.45	1.62	1.78	2.29	.95	.91
	Feb.	8.36	8.54	8.84	6.72	7.64	7.60	1.64	1.82	2.12	.92	.88
	Mar.	8.49	8.42	8.96	6.91	7.85	7.80	1.58	1.51	2.05	.94	.89
	Apr.	8.67	8.56	9.20	6.62	7.83	7.70	2.05	1.94	2.58	1.21	1.08
	May	8.85	8.78	9.23	6.97	7.99	7.92	1.88	1.81	2.26	1.02	.95
	June	8.94	8.86	9.18	6.62	7.99	7.85	2.32	2.24	2.56	1.37	1.23
	July	8.79	8.78	9.14	6.49	7.92	7.75	2.30	2.29	2.65	1.43	1.26
	Aug.	8.81	8.76	9.12	6.43	7.76	7.65	2.38	2.33	2.69	1.33	1.22
	Sept.	8.75	8.82	9.08	6.60	7.76	7.72	2.15	2.22	2.43	1.16	1.12
	Oct.	8.54	8.12	9.01	6.83	7.90	7.84	1.71	1.29	2.18	1.07	1.01
	Nov.	8.59	8.74	9.09	6.95	7.97	7.91	1.64	1.79	2.14	1.02	.96
	Dec.	8.69	8.74	9.10	7.30	8.11	8.10	1.39	1.44	1.80	.81	.80

Table A-17 (Cont'd.)

Yields				Yield Margin Over Long-Term Canadas							
Mortgages				Bonds				Mortgages			
NHA			Conven- tional	McLeod, Young & Weir			NHA			McLeod, Young & Weir	
Home- Ownership	Rental			Long- Term	20 Corporate	40	Home- Ownership	Rental	Conven- tional	20 Corporate	40
1969 Jan.	8.84	9.05	9.45	7.16	8.18	8.11	1.68	1.89	2.29	1.02	.95
Feb.	9.01	9.19	9.45	7.20	8.22	8.18	1.81	1.99	2.25	1.02	.98
Mar.	9.07	9.10	9.48	7.22	8.34	8.30	1.85	1.88	2.26	1.12	1.08
Apr.	9.06	8.92	9.52	7.29	8.31	8.31	1.77	1.63	2.23	1.02	1.02
May	9.12	9.27	9.50	7.48	8.51	8.46	1.64	1.79	1.98	1.03	.98
June	9.18	9.24	9.69	7.50	8.79	8.65	1.68	1.74	2.19	1.29	1.15
July	9.39	9.31	9.90	7.52	8.87	8.73	1.87	1.79	2.38	1.35	1.21
Aug.	9.59	9.60	9.99	7.53	8.88	8.77	2.06	2.07	2.46	1.35	1.24
Sept.	9.78	9.77	10.11	7.81	8.87	8.88	1.97	1.96	2.30	1.06	1.07
Oct.	9.87	9.59	10.21	7.82	8.90	8.91	2.05	1.77	2.39	1.08	1.09
Nov.	9.92	9.70	10.30	8.15	9.06	9.17	1.77	1.55	2.15	.91	1.02
Dec.	9.97	9.82	10.50	8.33	9.32	9.38	1.64	1.49	2.17	.99	1.05
1970 Jan.	10.06	9.96	10.58	8.31	9.36	9.45	1.75	1.65	2.27	1.05	1.14
Feb.	10.27	9.91	10.54	8.13	9.33	9.43	2.14	1.78	2.41	1.20	1.30
Mar.	10.21	10.15	10.58	7.93	9.28	9.35	2.28	2.22	2.65	1.35	1.42
Apr.	10.29	10.21	10.60	8.04	9.27	9.33	2.25	2.17	2.56	1.23	1.29
May	10.28	10.15	10.58	8.23	9.34	9.35	2.05	1.92	2.35	1.11	1.12
June	10.24	10.15	10.53	8.09	9.30	9.35	2.15	2.06	2.44	1.21	1.26
July	10.03	10.32	10.38	7.91	9.18	9.22	2.12	2.41	2.47	1.27	1.31
Aug.	9.94	10.34	10.40	8.00	9.23	9.21	1.94	2.34	2.40	1.23	1.21
Sept.	9.97	10.37	10.36	7.88	9.21	9.18	2.09	2.49	2.48	1.33	1.30
Oct.	9.86	10.27	10.35	7.94	9.25	9.22	1.92	2.33	2.41	1.31	1.28
Nov.	9.83	10.16	10.28	7.50	9.09	9.03	2.33	2.66	2.78	1.59	1.53
Dec.	9.79	10.39	10.16	6.99	8.87	8.68	2.80	3.40	3.17	1.88	1.69

Table A-17 (Cont'd.)

		Yields						Yield Margin Over Long-Term Canadas				
		Mortgages			Bonds			Mortgages			McLeod, Young & Weir	
		NHA		Conven- tional	Long- Term	McLeod, Young & Weir		NHA		Conven- tional	Bonds	
		Home- Ownership	Rental			20 Corporate	40	Home- Ownership	Rental		20 Corporate	40
1971	Jan.	9.65	10.25	9.94	6.67	8.16	7.87	2.98	3.58	3.27	1.49	1.30
	Feb.	9.47	9.91	9.72	6.85	8.33	8.17	2.62	3.06	2.87	1.48	1.32
	Mar.	8.98	9.64	9.28	6.76	8.39	8.24	2.22	2.88	2.52	1.63	1.48
	Apr.	8.84	9.33	9.20	6.97	8.49	8.35	1.87	2.36	2.23	1.52	1.38
	May	8.79	9.05	9.25	7.38	8.53	8.55	1.41	1.67	1.87	1.15	1.17
	June	8.80	9.18	9.34	7.30	8.64	8.62	1.50	1.88	2.04	1.34	1.32
	July	8.88	9.26	9.46	7.49	8.68	8.72	1.39	1.77	1.97	1.19	1.23
	Aug.	8.99	9.35	9.53	7.15	8.52	8.44	1.84	2.20	2.38	1.37	1.29
	Sept.	9.05	9.23	9.55	6.97	8.41	8.33	2.08	2.26	2.58	1.44	1.36
	Oct.	9.09	9.38	9.55	6.71	8.27	8.05	2.38	2.67	2.84	1.56	1.34
	Nov.	9.05	9.45	9.26	6.56	8.19	7.94	2.49	2.89	2.70	1.63	1.38
	Dec.	8.91	9.13	9.10	6.56	8.30	8.05	2.35	2.57	2.54	1.74	1.49

Table A-18

AVERAGE INTEREST RATES ON NHA LOANS APPROVED ON NEW CONSTRUCTION FOR HOME-OWNERSHIP
BY REGION, APPROVED LENDERS, AND MONTREAL AND TORONTO FIELD OFFICES OF CMHC
MONTHLY, 1970-71
(Percent)

	Region					Canada	Approved Lenders		CMHC Field Office	
	Atlantic	Quebec	Ontario	Prairie	B.C.		Chartered Banks	Other Lenders	Montreal	Toronto
1970 J	10.08	9.96	9.97	10.18	9.98	10.01	10.13	9.94	9.99	9.82
F	10.21	10.06	10.27	10.37	10.19	10.25	10.05	10.36	10.04	10.36
M	10.20	10.21	10.14	10.17	10.40	10.19	10.20	10.19	10.20	9.91
A	10.20	10.26	10.31	10.32	10.24	10.30	10.19	10.40	10.26	10.40
M	10.26	10.27	10.24	10.29	10.41	10.28	10.17	10.35	10.26	10.26
J	10.16	10.20	10.23	10.21	10.35	10.23	10.15	10.30	10.15	10.30
J	10.00	10.08	10.09	10.05	9.86	10.06	9.97	10.14	9.97	10.17
A	9.90	9.90	9.91	9.86	10.17	9.93	9.87	10.02	9.80	9.93
S	9.81	9.80	10.05	9.78	9.90	9.97	9.88	10.09	9.77	10.10
O	9.78	9.77	9.88	9.80	10.04	9.87	9.77	10.09	9.71	10.02
N	9.76	9.74	9.82	9.74	10.08	9.81	9.74	9.95	9.72	9.89
D	9.86	9.77	9.76	9.77	9.89	9.78	9.72	9.85	9.75	9.88
1971 J	9.45	9.60	9.71	9.57	9.71	9.64	9.57	9.81	9.59	9.88
F	9.39	9.29	9.66	9.30	9.41	9.45	9.46	9.43	9.31	9.86
M	8.94	9.10	8.96	8.92	9.04	8.99	8.94	9.08	9.14	9.15
A	8.97	8.87	8.85	8.77	8.97	8.85	8.80	8.91	8.85	8.92
M	8.79	8.80	8.79	8.77	8.86	8.79	8.76	8.83	8.80	8.79
J	8.89	8.78	8.81	8.80	8.83	8.81	8.75	8.89	8.78	8.82
J	8.84	8.79	8.91	8.80	9.06	8.88	8.81	9.00	8.79	8.98
A	9.08	8.84	9.06	8.94	9.11	8.99	8.91	9.14	8.11	9.15
S	8.89	8.92	9.14	9.03	9.08	9.04	8.94	9.18	8.90	9.23
O	9.10	8.93	9.16	9.14	9.06	9.09	8.98	9.25	8.89	9.19
N	8.93	8.96	9.12	9.06	9.06	9.05	8.99	9.16	8.94	9.17
D	8.93	8.90	8.91	8.90	8.94	8.91	8.86	8.99	8.91	9.01

Table A-19

SALES OF NHA-INSURED MORTGAGES
AND NHA-INSURED MORTGAGE LOANS OUTSTANDING, 1954-71

	<i>Sales — \$ Millions</i>		<i>NHA Loans Outstanding \$ Millions (3)</i>	<i>Column (2) as % of column (3) (4)</i>
	<i>Initial Only (1)</i>	<i>Initial and Subsequent (2)</i>		
1954	0.6	0.6	1428.0	—
55	17.4	17.4	1891.0	—
56	49.6	49.7	2314.0	0.02
57	62.2	62.2	2535.0	0.02
58	47.7	48.8	3175.0	0.02
59	42.6	42.6	3800.0	0.01
1960	27.3	27.4	4103.0	0.01
61	61.9	71.2	4573.0	0.02
62	101.6	137.9	4999.0	0.03
63	129.1	176.7	5325.0	0.03
64	150.0	216.9	5708.0	0.04
65	136.4	211.3	6086.0	0.03
66	88.4	102.3	6568.0	0.02
67	68.0	77.3	7156.0	0.01
68	43.0	47.6	7750.0	0.01
69	127.6	145.1	8619.0	0.02
1970	129.9	131.8	9703.0	0.01
71	84.1	90.3	11343.0	0.01

Source: CMHC.

Table A-20

SALES AND PURCHASES OF NHA-INSURED MORTGAGES,
BY TYPE OF TRANSACTOR, 1954-71
(\$ Millions)

	Lending Institutions				Other Investors				
	Chartered Banks	Life Insurance Companies	Trust Companies	Loan Companies and other	CMHC	Pension Funds	Corporations	Other	Total
Sales									
1954	0.6	—	—	—	—	—	—	—	0.6
55	13.5	—	3.4	0.6	—	—	—	—	17.5
56	33.3	5.1	8.2	2.5	0.6	—	—	—	49.7
57	41.2	8.6	9.7	2.1	0.6	—	—	—	62.2
58	32.5	7.8	4.4	1.5	1.5	—	—	—	47.7
59	36.8	1.9	3.4	0.1	0.4	—	—	—	42.6
1960	6.3	9.0	4.3	7.3	0.4	—	—	—	27.3
61	—	—	19.3	2.6	40.0	—	—	—	61.9
62	0.7	—	47.1	5.9	47.9	—	—	—	101.6
63	0.2	1.0	58.9	7.9	61.1	—	—	—	129.1
64	3.1	5.0	58.2	8.4	75.3	—	—	—	150.0
65	0.7	0.5	52.2	2.2	80.8	—	—	—	136.4
66	15.1	—	70.0	3.2	—	—	—	—	88.3
67	1.6	—	65.8	0.6	—	—	—	—	68.0
68	16.8	2.9	23.3	—	—	—	—	—	43.0
69	39.9	17.8	65.8	4.1	—	—	—	—	127.6
1970	47.9	4.3	74.9	2.8	—	—	—	—	129.9
71	33.8	2.1	22.8	4.0	21.4	—	—	—	84.1
Total	\$324.0	66.0	591.7	55.8	330.0	—	—	—	1367.5
	% 23.7	4.8	43.3	4.1	24.1	—	—	—	100.0
Purchases									
1954	—	0.3	—	—	—	0.3	—	—	0.6
55	—	2.7	—	0.1	—	14.7	—	—	17.5
56	—	8.6	0.5	3.0	—	35.3	2.3	—	49.7
57	—	10.3	0.8	—	—	31.2	19.9	—	62.2
58	—	4.6	2.3	—	—	31.2	9.6	—	47.7
59	—	3.4	0.1	—	—	38.1	1.0	—	42.6
1960	—	0.4	0.8	6.5	—	12.9	6.7	—	27.3
61	18.3	11.5	14.7	—	—	4.6	12.8	—	61.9
62	30.6	22.1	21.4	—	—	19.6	7.8	0.1	101.6
63	49.1	15.6	24.8	3.6	—	23.3	12.3	0.4	129.1
64	46.8	21.4	25.8	10.9	3.1	17.1	24.9	—	150.0
65	31.6	25.3	30.2	7.5	—	5.7	35.5	0.6	136.4
66	19.7	33.2	3.1	7.7	—	23.6	0.2	0.8	88.3
67	4.9	56.3	1.7	2.2	—	2.1	0.8	—	68.0
68	2.2	9.9	4.3	2.0	—	8.5	16.0	0.1	43.0
69	0.1	50.3	—	3.0	—	59.3	14.8	0.1	127.6
1970	0.2	66.3	1.1	0.8	—	30.5	30.9	0.1	129.9
71	28.0	7.4	4.4	0.5	—	24.3	14.5	5.0	84.1
Total	\$231.5	349.6	136.0	47.8	3.1	382.3	210.0	7.2	1367.5
	% 16.9	25.6	9.9	3.5	0.2	28.0	15.4	0.5	100.0

Data for initial sales and purchases only. Subsequent sales and purchases are excluded. Lending institutions are included under the appropriate category whether or not they are Approved Lenders under the National Housing Act.

Source: CMHC.

Table A-21

DISTRIBUTION OF TRANSACTIONS¹ IN NHA-INSURED MORTGAGES,
BY TYPE OF TRANSACTOR, 1971
(\$ Millions)

Purchaser Seller	Lending Institutions				Other Investors			Total
	Chartered Banks	Life Insur- ance Com- panies	Trust Com- panies	Loan Com- panies and others	Pension Funds	Corpor- ations	Other	
Chartered Banks	—	—	—	0.6	14.3	14.9	4.9	34.7
Life Insurance Companies	2.0	—	0.1	—	—	—	—	2.1
Trust Companies	6.8	5.9	4.4	—	9.3	0.3	—	26.7
Loan and Other Companies	1.8	1.5	—	—	0.7	—	0.1	4.1
CMHC	21.4	—	—	—	—	—	—	21.4
Other Firms & Institutions	1.2	—	—	0.1	—	—	—	1.3
Total	33.2	7.4	4.5	0.7	24.3	15.2	5.0	90.3

¹ Includes initial and subsequent sales.

Source: CMHC.

Table A-22

BIDS AND AMOUNTS, PRICES, AND YIELDS ON SALES
FOR CMHC AUCTIONS OF NHA-INSURED MORTGAGES, 1961-5

Date	Bids Received \$ Millions	Mortgages Sold \$ Millions	Mortgage Interest Rate %	Average Price \$	Average Yield ¹ %	Current NHA Interest %	Current Long-Term Canada Bond Yield ² %
June 19	30.00	12.50	6¾ %	101.17	6.58	6.75	5.10
Aug. 29	21.00	13.50	6¾ %	101.35	6.55	6.75	5.01
Nov. 21	30.50	15.00	6¾ %	101.79	6.49	6.50	4.84
Mar. 20	60.25	15.00	6 %	97.60	6.35	6.50	4.90
Nov. 20	57.00	30.00	6 %	97.20	6.39	6.50	4.97
			6¾ %	102.26	6.43		
Jan. 22	40.00	27.25	6 %	96.55	6.49	6.50	5.09
			6¾ %	101.97	6.47		
May 28	95.75	35.00	6 %	97.61	6.36	6.50	4.95
			6¾ %	102.70	6.39		
Feb. 25	113.25	25.00	6 %	97.69	6.36	6.25	5.18
			6¾ %	102.64	6.39		
May 20	113.25	25.00	6 %	97.85	6.33	6.25	5.21
			6½ %	100.97	6.37		
Sept. 23	115.50	25.00	6 %	99.24	6.17	6.25	5.22
			6½ %	101.00	6.36		
Dec. 15	84.50	25.00	6 %	98.24	6.27	6.25	5.04
			6½ %	100.96	6.37		
Mar. 10	119.75	30.00	6 %	98.41	6.26	6.25	5.06
			6¼ %	99.96	6.26		
May 19	135.50	26.50	6 %	98.32	6.26	6.25	5.12
			6¼ %	99.66	6.30		

¹ Based on mortgage life expectancy of one-half remaining term of mortgage.

² Average as compiled by Bank of Canada.

Sources: CMHC, Bank of Canada *Statistical Summary*.

Table A-23
 ALLOTMENTS AT CMHC AUCTIONS OF NHA-INSURED MORTGAGES, 1961-5
 (\$ Millions)

	<i>1961</i>			<i>1962</i>		<i>1963</i>		<i>1964</i>				<i>1965</i>		<i>Total Sold</i>
<i>Type of Bidder</i>	<i>June</i>	<i>Aug.</i>	<i>Nov.</i>	<i>March</i>	<i>Nov.</i>	<i>Jan.</i>	<i>May</i>	<i>Feb.</i>	<i>May</i>	<i>Sept.</i>	<i>Dec.</i>	<i>Mar. 10</i>	<i>May 19</i>	
Banks ¹	5.00	6.75	2.50	—	1.50	8.00	2.25	—	2.00	16.50	—	—	—	44.50
Trust Companies	6.00	2.50	4.75	9.75	6.50	4.75	13.50	9.25	5.75	1.00	7.25	11.00	9.75	91.75
Insurance Companies	0.50	0.50	—	3.75	—	1.50	2.25	1.50	1.00	—	—	0.75	—	11.75
Investment Dealers ¹	1.00	3.75	7.75	1.50	18.50	10.00	17.00	7.25	14.00	6.00	15.50	17.75	13.00	133.00
Mortgage Companies	—	—	—	—	—	—	—	0.50	0.50	—	—	—	—	1.00
Others	—	—	—	—	3.50	3.00	—	6.50	1.75	1.50	2.25	0.50	3.75	22.75
Total	12.50	13.50	15.00	15.00	30.00	27.25	35.00	25.00	25.00	25.00	25.00	30.00	26.50	304.75

¹ Allotments on joint bids (banks and investment dealers) are shown under investment dealers.

Source: CMHC.

Table A-24

HOUSING ACT MORTGAGE TERMS FOR JOINT AND INSURED LOANS, 1935-71
SINGLE-FAMILY DWELLINGS

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
<i>Joint Loans</i>					
1935 Jan. 1	Dominion Housing Act, 1935	5.00% (Borrower) 5.66% (Lender)	80%	10 years	No limitation
1938 July 1	National Housing Act, 1938	" "	90% of 1st \$2,500 80% of remainder	"	"
1939 Dec. 31	P.C. 4020	" "	"	"	\$4,000
1943 Dec. 19	P.C. 11047	" "	90% of 1st \$3,200 80% of remainder	"	"
1944 May 11	Statement by Minister of Finance (Hon. J. L. Ilsley) House of Commons	4.50% (Borrower) 5.00% (Lender)	"	"	"
1944 Aug. 15	National Housing Act, 1944	" "	95% of 1st \$2,000 85% of next \$2,000 70% of remainder	20 years	\$6,400
1946 Aug. 31	Statutes of Canada 1946, Chapter 1	" "	"	25 years	"
1947 June 27	Statutes of Canada Chapter 40	" "	95% of 1st \$3,000 85% of next \$3,000 70% of remainder	30 years	\$7,000
1947 Oct. 10	P.C. 4089	" "	"	"	\$8,500

Table A-24 (Cont'd.)

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
1949 Dec. 10	Statutes of Canada 1949, Chapter 30	4.50% (Borrower) 5.00% (Lender)	95% of 1st \$3,000 85% of next \$3,000 70% of remainder plus 1/6 additional loan	30 years	\$9,917
1951 Feb. 5	Statement in House of Commons by Minister of Resources and Development (Hon. R. R. Winters)	" "	95% of 1st \$3,000 85% of next \$3,000 70% of remainder 1/6 additional loan suspended	"	\$8,500
1951 June 26	P.C. 3344	5.00% (Borrower) 5.50% (Lender)	"	"	"
1951 Dec. 19	P.C. 6804	" "	"	"	\$10,000
1952 Aug. 31	P.C. 3907	5.25% (Borrower) 5.75% (Lender)	"	"	"
<i>Insured Loans</i>					
1954 Mar. 22	National Housing Act, 1954	5.50%	90% of 1st \$8,000 70% of remainder	30 years	\$12,800
1955 Feb. 16	P.C. 213	5.25%	"	"	"
1956 Mar. 23	P.C. 466	5.50%	"	"	"
1957 Jan. 22	P.C. 90	6.00%	"	"	"
1957 Dec. 20	Statutes of Canada 1957-58, Chapter 18	6.00%	90% of 1st \$12,000 70% of remainder	"	\$12,800
1959 Dec. 16	P.C. 1584	6.75%	"	"	"

Table A-24 (Cont'd.)

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
1960 Aug. 4	P.C. 1063	6.75%	90% of 1st \$12,000 70% of remainder	30 years	\$12,000 (+ \$500 if fallout shelter included)
1960 Dec. 2	9 Elizabeth II, Chapter I	"	95% of 1st \$12,000 70% of remainder	35 years	"
1960 Dec. 7	P.C. 1649	"	"	"	\$14,200 (\$14,900 for four bed-rooms or more, + \$500 for fall-out shelter)
1961 Nov. 6	P.C. 1559	6.50%	"	"	"
1963 June 14	P.C. 914	6.25%	"	"	"
1963 June 27	P.C. 992	"	"	"	\$14,900 (\$15,600 for four bed-rooms or more + \$500 for fall-out shelter)
1964 June 18	Statutes of Canada 1964, Chapter 15	"	95% of 1st \$13,000 70% of remainder for new housing 85% for existing houses in Urban Renewal Areas	"	"
1965 May 6	P.C. 813	"	"	"	\$18,000 (+ \$500 for fallout shelter)
1966 Jan. 5	P.C. 6	6.75%	"	"	"

Table A-24 (Cont'd.)

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
1966 Nov. 22	P.C. 2178	7.25%	95% of 1st \$13,000 70% of remainder for new housing 85% for existing houses in Urban Renewal Areas 95% for purchase of existing house anywhere	35 years	\$18,000 (+ \$500 for fallout shelter) \$10,000 Existing house
1967 Apr. 1		7.00%	"	"	"
1967 June 1	P.C. 1273	"	"	"	\$10,000 on each ½ of existing semi-detached and duplexes
1967 July 1		7.25%	"	"	"
1967 Oct. 1	P.C. 1835	8.25%	"	"	"
1968 Jan. 1		8.625% Insured Loans 8.25% CMHC Loans	95% for purchase of existing house anywhere	"	\$18,000 (+ \$500 for fallout shelter) new \$10,000 existing \$10,000 on each ½ of existing semi-detached and duplexes
1968 Mar. 27	Statutes of Canada 1968, Chapter 39	"	" 95% of 1st \$18,000 70% of balance for new housing	"	"
1968 Apr. 1		9.125% Insured 8.75% CMHC	"	"	"
1968 July 1		8.875% Insured 8.75% CMHC	"	"	"

Table A-24 (Cont'd.)

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
1968 Oct. 1		8.75% Insured 8.50% CMHC	95% of 1st \$18,000 70% of balance for new housing	35 years	\$10,000 on each ½ of existing semi-detached and duplexes
1969 Jan. 1		9.375% Insured 9.00% CMHC	"	"	"
1969 Apr. 15	P.C. 683	"	"	5 year renewable mortgage new housing	"
1969 Apr. 22	P.C. 782	"	"	"	\$25,000 + \$500 for fallout new, \$18,000 existing
1969 June		"	"	5 year renewable extended to existing housing	"
1969 June 27	P.C. 1321	"	" 95% 1st \$20,000 80% of balance for new housing	"	"
1969 June 27	Statutes of Canada 1968-69, Chapter 45	Freed Ceiling rate removed	"	40 years	" and condominiums eligible for loans. Max. \$25,000

Table A-24 (Cont'd.)

RENTAL LENDING

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
<i>Joint Loans</i>					
1935 Jan. 1	Dominion Housing Act, 1935	5.00%	80%	10 years	No limitation
1939 Dec. 31	P.C. 4020	Rental Loans Suspended			
1944 Aug. 15	National Housing Act, 1938	4.50%	80%	20 years	\$4,000
1947 Jan. 1	P.C. 5238	"	"	"	\$4,400
1947 June 27	Statutes of Canada 1947 Chapter 40	"	"	30 years	"
1948 July 20	P.C. 3138	"	"	"	\$4,800
1949 Dec. 6	P.C. 6129	"	"	"	\$6,700
1952 Oct. 30	P.C. 4272	5.25%	"	"	\$7,200
<i>Insured Loans</i>					
1954 Mar. 22	National Housing Act, 1954	5.50%	80%	25 years	\$7,000 (+ 80% value of garage)
1955 Feb. 16	P.C. 213	5.25%	"	"	"
1956 Mar. 23	P.C. 466	5.50%	"	"	"
1957 Jan. 22	P.C. 90	6.00%	"	"	"

Table A-24 (Cont'd.)

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
1958 Mar. 29	P.C. 456	6.00%	80%	25 years	\$8,250
1959 Dec. 16	P.C. 1584	6.75%	"	"	"
1960 Dec. 2	9 Elizabeth II, Chapter I	"	85%	35 years	"
1960 Dec. 7	P.C. 1649	"	"	"	\$8,750
1961 Nov. 6	P.C. 1559	6.50%	"	"	"
1963 June 14	P.C. 914	6.25%	"	"	"
1963 June 27	P.C. 992	"	"	"	\$12,000
1965 June 2	P.C. 813	"	"	"	\$12,000 for multi-family dwelling; \$7,000 per person accommodated in Hostel or Dorm
1966 Jan. 5	P.C. 6	6.75%	"	"	"
1966 Nov. 22	P.C. 2178	7.25%	90%	"	"
1967 Apr. 1		7.00%	"	"	"
<i>Insured Loans</i>					
1967 July 1		7.25%	90%	35 years	\$12,000 for multi-family dwelling; \$7,000 per person accommodated in Hostel or Dorm

Table A-24 (Cont'd.)

<i>Date</i>	<i>Legislative Authority</i>	<i>Interest Rate</i>	<i>Loan-to-value Ratio</i>	<i>Term of Loan</i>	<i>Maximum Loan Amount</i>
1967 Oct. 1	P.C. 1835	8.25%	90%	35 years	\$12,000 for multi-family dwelling; \$7,000 for person accommodated in Hostel or Dorm
1968 Jan. 1		8.625% Insured Loans 8.25% CMHC Loans	"	"	"
1968 Feb. 1	P.C. 189	"	"	"	\$18,000 Apt. Dwelling
1968 Apr. 1		9.125% Insured 8.75% CMHC	"	"	"
1968 July 1		8.875% Insured 8.75% CMHC	"	"	"
1968 Oct. 1		8.75% Insured 8.50% CMHC	"	"	"
1969 Jan. 1		9.375% Insured 9.00% CMHC	"	"	"
1969 Apr. 15	P.C. 683	"	"	5 year renewable mortgage new housing	"
1969 June		"	"	"	"
				Extended to existing housing	
1969 June 27	Statutes of Canada 1968-69, Chapter 45	Freed Ceiling rate removed	"	" 40 years	"

Sources: J. V. Poapst, *The Residential Mortgage Market*, working paper prepared for the Royal Commission on Banking and Finance (Ottawa, 1962); and CMHC.

Appendix B

Classification of Responses for Interview Survey of Lending Institutions and Investment Dealers on a Central Mortgage Bank Proposal

*Conducted in the Spring of 1971 by the Special Project Team
on New Financing Mechanisms and Institutions*

Summary by Roger Simard

Notes on Survey Procedure

The questionnaire was developed by E. D. L. Miller and other members of the Special Project Team. A purposive sample was selected to include the larger institutions of each type, along with a number of smaller regional firms. The questionnaire was distributed in advance to the presidents of the selected firms, who in turn selected the officers in their organizations who were to be interviewed. The interviews were conducted after there had been sufficient time for the interviewees to study the questionnaire and consider their replies. The interviews followed either of two procedures: replies were elicited question by question in accordance with the questionnaire, or the interview was devoted to clarifying questions and discussing them on a preliminary basis, with the returns being submitted later by mail. All interviews were conducted by participants of the Special Project Team. Some were conducted by a single interviewer, some by pairs. An interviewer knowledgeable about mortgages or, more broadly, the capital market was present at each interview, but no professional interviewers were used. Generally, the interviewees were highly cooperative; this tabulation is based on forty returns out of forty-two interviews.

J.V.P.
June 1972

QUESTIONS

NUMBER OF COMPANIES*

1) Do you feel that residential mortgages can be sold:

- a. Easily
- b. With moderate difficulty
- c. With difficulty
- d. With great difficulty
- e. Cannot be sold
- No comment

B	T&L	Life	I.D.	Total
		1	1	2
2	6	6	1	15
3	8	4	1	16
2	2	0	0	4
1	—	1	1	3

2) Do you feel that residential mortgages can be purchased:

- a. Easily
- b. With moderate difficulty
- c. With difficulty
- d. With great difficulty
- e. Cannot be purchased
- No comment

1	1	3	1	6
	5	4	1	10
3	8	4	1	16
3	2			5
1	—	1	1	3

3) Can you visualize occasions when you would like to borrow against your mortgage portfolio:

- a. Yes
- b. No
- c. Don't know

1	12	3	2	18
7	4	6	1	18
—	—	3	1	4

4) If answer to (3) is yes, what events do you think would give rise to such a wish?

- a. Change in economic climate
- b. Change in investment policy of company
- c. Change in internal company situation
- d. Other (specify)
- No comment

				**
2	2	2	2	8
2	2	1	1	6
3	4	1		8
	3			3
1	6	7	1	15

* B = Banks, T&L = Trust and Loan Companies, Life = Life Insurance Companies, I.D. = Investment Dealers.

** Some respondents gave more than one reply.

5) Should loans on a residential mortgage portfolio be provided:

a. On emergency basis only

b. In stipulated circumstances only

c. On request

d. Other basis (specify)

No comment

B	T&L	Life	I.D.	Total	
		1	2	1	4
4	3	2	1	10	
1	10	4	1	16	
3	2	4	1	10	

6) If a liquidity facility in the form of loans from a CMB were available, would you use it:

a. Frequently (several times a year)

b. From time to time (less than once a year)

c. Reluctantly

d. Never

No comment

		4		1	5
1	5	1	1	8	
3	4	7	1	15	
4	1	3	1	9	
	2	1		3	

7) Who do you think should be permitted to deal with the CMB?

a. All comers

b. All financial institutions

c. All approved lenders

d. Only a designated group of lenders

e. Some other group. Investment Dealers

No comment

1	1	4		6
1	2	2		5
3	10	4	2	19
3	3			6
			2	2
		2		2

8) After due allowance for risk on the specific mortgages involved, what interest rate do you think that loans from a CMB should be related to?

a. Same as 3 months treasury bill rate

b. Bank rate (Bank of Canada re-discount rate)

c. Prime rate charged by chartered banks

d. Going rate on conventional residential mortgages

e. Going market rate on NHA mortgages

f. CMHC's Section 40 rate

No comment

2	1			3
	3	2		5
1	8	4		13
2	1	3		6
2	3	2	3	10
1	—	1	1	3

9) Should a CMB be allowed to administer its lending rate for mortgage market policy reasons?

- a. Yes
- b. No
- c. No opinion
- No comment

B	T&L	Life	I.D.	Total
---	-----	------	------	-------

3	7	4	2	16
3	6	4	1	14
2	3	2		7
		2	1	3

10) For how long should a CMB be prepared to lend?

- a. 1 month
- b. 3 months
- c. 6 months
- d. 1 year
- e. 18 months
- No comment

	4	2	1	7
3	4		1	8
1	4	4		9
	1			1
4	3	6	2	15

11) What type of residential mortgages should a CMB be prepared to loan against?

- a. NHA single family
- b. NHA multiple family
- c. NHA condominium
- d. NHA construction mortgages
- e. Conventional single family
- f. Conventional multiple family
- g. Conventional condominium
- h. Conventional construction mortgages
- i. Mortgages in good standing only
- j. Mortgages in arrears 1 month
- k. Mortgages in arrears 3 months
- l. Mortgages in foreclosure proceedings
- m. Insured conventional mortgages with loan to value ratio over 75%
- n. Uninsured conventional mortgages with loan to value ratio over 75%

6	13	9	5	33
6	14	9	5	34
6	14	9	5	34
1	6	2	2	11
2	6	7		15
2	8	6		16
1	8	6		15
		1		1
4	12	12	1	29
1	3	1		5
1				1
1	6	1		8
1		1		2

	B	T&L	Life	I.D.	Total
12) Can you visualize occasions when you would like to buy or sell mortgages?					
a. Yes	6	14	10	4	34
b. No	1	2	1		4
c. Don't know	1		1		2
13) If answer to question (12) is yes, what events do you think would give rise to such a wish?					*
a. Change in economic climate	3	7	5	1	16
b. Change in investment policy of company	3	5	7	2	17
c. Change in internal company situation	4	3	5		12
No comment	1	3	1	2	7
14) Should a CMB purchase mortgages:					
a. On emergency basis only	1	1			2
b. In stipulated circumstances only	2	4	3		9
c. On request	3	6	8	4	21
No comment	2	4	1	1	8
15) If a liquidity facility via CMB purchases were available, would you use it:					
a. Frequently (several times a year)	1	4		3	8
b. From time to time (less than once a year)	2	5	3		10
c. Reluctantly	4	6	8		18
d. Never	1		1		2
No comment			1	1	2

* Some respondents gave more than one reply.

16) What type of residential mortgages should a CMB be allowed to buy and sell?

	B	T&L	Life	I.D.	Total
a. NHA single family	6	14	10	4	34
b. NHA multiple family	6	14	10	4	34
c. NHA condominium	6	14	10	4	34
d. NHA construction mortgage		7	4	2	13
e. Conventional single family	3	9	8	1	21
f. Conventional multiple family	3	8	7	1	20
g. Conventional condominium	1	9	7	1	18
h. Conventional construction mortgage		3	3		6
i. Mortgages in good standing only	5	13	12	2	32
j. Mortgages in arrears 1 month	1	1	1		3
k. Mortgages in arrears 3 months	1				1
l. Mortgages in foreclosure proceedings	1				1
m. Insured conventional mortgages with loan to value ratio over 75%	1	3	2		6
n. Uninsured conventional mortgages with loan to value ratio over 75%	1				1

17) After due allowance for risk, what kind of price should be set on purchases by CMB?

a. Priced to yield as applicable average NHA or residential conventional mortgage rate	1	7	1	1	10
b. Priced to yield as applicable average NHA or residential conventional mortgage rate plus 1/8%	2	2	1		5
1/4%	4	2	3	1	10
3/8%	4		1		5
1/2%	2	2	2	1	7
3/4%	1		1		2
1%			1		1

a. \$0.25 per \$100
b. \$0.50 per \$100
c. \$1.00 per \$100
d. \$1.50 per \$100
e. \$2.00 per \$100
f. \$2.50 per \$100
g. \$3.00 per \$100
h. \$5.00 per \$100
No comment

B	T&L	Life	I.D.	Total
1			1	2
1	7	3		11
4	4	4	1	13
	1	1		2
		1		1
1		1	1	3
1	4	2	1	8
	4	6	1	11
7	9	2		18
1	1	2		4
	2	2	3	7

a. Sometimes
b. Always
c. Never
No comment

- 20) If you retain servicing, what fee would you require, expressed in percent of outstanding principal balance:

Single Family	B	T&L	Life	I.D.	Total
1/10%					
1/8%		1			1
1/4%			2		2
3/8%	3	6	1	1	11
1/2%	4	3	3		10
5/8%			1		1
3/4%		1			1
No Comment	1	5	5	3	14

Multiple Family	B	T&L	Life	I.D.	Total
1/10%		1			1
1/8%	3	1	3	1	8
1/4%	2	4	2		8
3/8%			2		2
1/2%	1	2			3
5/8%		1			1
3/4%					
No Comment	2	7	5	3	17

- 21) Please indicate at what frequency the outstanding principal balance to which the servicing fee in question 20 is applied, is calculated:

- a. Monthly
- b. 3 Monthly
- c. Semi-annually
- d. Annually
- No comment

B	T&L	Life	I.D.	Total
3	9	4		16
	1	1		2
2	2	1		5
2	1	1		4
1	3	5	4	13

- 22) What do you feel should be the *minimum* size of sales or purchases from CMB?

- a. No minimum
- b. \$10,000
- c. \$100,000
- d. \$250,000
- e. \$500,000
- f. \$1,000,000
- No comment

		2		2
	1	1		2
5	9	4	1	19
	4	3	1	8
3	2	2	2	9

- 23) What do you feel should be the maximum size of sales or purchases from the CMB?

- a. \$1 million
- b. \$5 million
- c. \$10 million
- d. \$50 million
- e. \$100 million
- f. Some other maximum (specify)
- g. No maximum
- No comment

	1			1
3	2	1	1	7
1	3	1	1	6
	1	2		3
	1			1
			1	1
2	6	6		14
2	2	2	1	7

- 24) Should there be a limit to the proportion of a lender's residential mortgage portfolio that can be sold to a CMB?

- a. Yes
- b. No
- No comment

	7	2		9
5	4	9	3	21
3	5	1	1	10

- 25) If your answer to question 24 is yes, what proportion of the lender's residential mortgage portfolio would you suggest as an upper limit?

* Several trust and loan companies gave a specific answer with a range of 10 to 25%.

- 26) If you could borrow from a CMB, would this increase the proportion of your assets held in mortgages?

a. Yes

b. No

c. Uncertain

No comment

- 27) If your answer to question 26 is yes, by how much do you estimate it would increase your residential mortgage to assets ratio?

a. 1%

b. 5%

c. 10%

d. 15%

e. 20%

f. 25%

No comment

- 28) How much increase in your residential mortgage portfolio per year expressed in millions of dollars is implied by your answer to question 27?

\$———millions

* Several trust and loan companies reported in a range of \$2 to \$25 millions.

- 29) If you could sell mortgages to a CMB, would this increase the proportion of your assets held in mortgages?

a. Yes

b. No

c. Uncertain

No comment

B	T&L	Life	I.D.	Total
*				
	10	2	2	14
4	5	6		15
3	1	4		8
1			2	3
	1			1
	4			4
	2			2
8	9	12	4	33
*				
	8	1	1	10
3	4	5		12
		4		4
5	4	2	3	14

30) If your answer to question 29 is yes, by how much do you estimate it would increase your residential mortgage to assets ratio?

- a. 1%
- b. 5%
- c. 10%
- d. 15%
- e. 20%
- f. 25%

No comment

B	T&L	Life	I.D.	Total
1				1
	1			1
	2			2
	1			1
	4		1	5
7	8	12	3	30
No comments				
4	15	7	3	29
2	1	4	1	8
2		1		3
5	14	8	3	30
	1	1		2
3	1	3	1	8
	3	1		4
5	10	7	4	26
5	10	6	4	25
2	2	5		9

31) How much increase in your residential mortgage portfolio per year expressed in millions of dollars is implied by your answer to question 27?

\$———millions

32) Have you purchased or sold mortgages in the past?

- a. Yes
- b. No

No comment

33) If a CMB were in existence, would you buy or sell mortgages:

- a. More frequently than in the past
- b. Less frequently than in the past
- c. Would not change volume of purchases or sales

No comment

34) Do you think a CMB should strive to keep its inventory of mortgages in dollar terms:

- a. Constant at all times
- b. Increasing steadily
- c. Increasing only in "tight money" periods
- d. Decreasing in "tight money" periods
- e. Decreasing in "easy money" periods

No comment

B	T&L	Life	I.D.	Total
		1		1
	2	2		4
	2	1	1	4
		1	1	2
1	1	1		3
2				2
1				1
			1	1
4	10	7	1	22

Range of Replies (\$ millions)				
2000 to 3000	100 to 1000	100 to 500	500	100 to 3000
6	12	9	4	31
6	12	10	4	32
6	13	11	4	34
6	12	11	2	31
5	13	9	3	30
5	12	10	3	30
5	12	11	4	32
5	12	9	4	30
2	2	1	—	5

6	12	9	4	31
6	12	10	4	32
6	13	11	4	34
6	12	11	2	31
5	13	9	3	30
5	12	10	3	30
5	12	11	4	32
5	12	9	4	30
2	2	1	—	5

38) All the data listed in question 37 should be available for the following geographical areas:

- a. Canada
- b. Provinces
- c. Metropolitan areas
- d. Major urban areas
- e. All municipalities
- No comment

B	T&L	Life	I.D.	Total
4	7	1	3	15
2	10	3	1	16
3	7	3	1	14
2	4	3	1	10
1		2	1	4
2	1	2	1	6

39) All the data listed in question 37 should be available for the following type of traders:

- a. All traders combined
- b. All banks combined
- c. All life companies combined
- d. All trust companies combined
- e. All mortgage loan companies combined
- f. All mortgage brokers combined
- g. All pension funds combined
- h. All investment dealers combined
- i. All other financial institutions combined
- j. All non-financial corporations combined
- No comment

40) Do you think that the trader or originator of the mortgages offered for sale should be named?

- a. Yes
- b. No
- c. Undecided
- No comment

41) Should a CMB be prepared to make forward commitments?

- a. Yes
- b. No
- c. Undecided
- No comment

42) If answer to question 41 is yes, for how long a period should these forward commitments be?

a. No minimum period

b. 1 month

c. 3 months

d. 6 months

e. 9 months

f. 12 months

g. 18 months

h. 2 years

i. No maximum period

No comment

	B	T&L	Life	I.D.	Total
		2			2
		4			4
		2	1		3
	1		1		2
	1	2	1		4
	6	6	9	4	25

	1	2			3
		4	1		5
		1	1		2
	1		1		2
	6	9	9	4	28

43) What kind of fee should be charged for such forward commitments?

Percent of amount committed 1/8%

1/4%

3/8%

1/2%

1%

2%

5%

No comment

44) What kind of liabilities should a CMB be allowed to assume?

	B	T&L	Life	I.D.	Total
a. Accept deposits from banks	9	3	1	13	
b. Accept deposits from life companies	9	3	1	13	
c. Accept deposits from mortgage loan companies	9	3	1	13	
d. Accept deposits from trust companies	10	3	1	14	
e. Accept deposits from other financial corporations	10	3	1	14	
f. Accept deposits from the Bank of Canada	10	4	2	16	
g. Accept deposits from the Consolidated Revenue Fund	1	9	2	2	14
h. Accept deposits from others (specify)	5			5	
i. Issue short-term paper (demand to 1 year)	4	13	7	3	27
j. Issue long-term bonds and debentures (6 years to 30 years)					
No comment					

45) Should a CMB issue common shares?

a. Yes	6	11	6	3	26
b. No		5	3		8
No comment	2		3	1	6

46) If answer to question 45 is yes, who do you think should be able to buy these shares?

a. Only CMHC	1	5	1	1	8
b. Consolidated Revenue Fund	7	5	6	3	21
c. Private financial institutions	4	5	4	1	14
d. Individual					
No comment	1	4	6	2	13

47) What proportion of shares should be held by the Federal government?

a. 100%	5	10	5	3	23
b. 80%					
c. 51%	1	2	2	1	6
No comment	2	4	5		11

48) If a Central Mortgage Bank existed, do you think it would narrow the differential between mortgage rates and long-term government bond rates?

- a. Yes
- b. No
- c. Uncertain
- No comment

B	T&L	Life	I.D.	Total
4	11	4	4	23
	1	3		4
	2	3		5
4	2	2		8
		1		1
1	3	1	2	7
	2		1	3
		1		1
1	3		1	5
2	3	1		6

49) If the answer to question 48 is yes and assuming the current differential between NHA mortgages and long-term government bond yields to be around 225 basis points, what differential would you expect to see after the introduction of a CMB?

- a. 225 basis points
- b. 200 basis points
- c. 175 basis points
- d. 150 basis points
- e. 125 basis points
- f. 100 basis points
- g. 75 basis points
- No comment

50) If a CMB is established, what kind of assets should it be allowed to hold?

	B	T&L	Life	I.D.	Total
a. Deposits with Bank of Canada	4	10	8	2	24
b. Deposits with chartered banks	1	12	7	2	22
c. Deposits with loan companies	1	12	5	2	20
d. Deposits with trust companies	1	12	5	2	20
e. Direct and guaranteed obligations of Federal government	3	10	8	3	24
f. Direct and guaranteed obligations of provincial government	3	8	4	2	17
g. Obligations of trust companies	2	10	3	1	16
h. Obligations of loan companies	2	10	3	1	16
i. Mortgage backed securities	2	9	2	1	13
j. Loans to approved lenders secured by mortgages	2	12	8	3	25
k. NHA mortgages	4	13	9	3	29
l. Privately insured mortgages	3	10	6	1	20
m. Conventional residential mortgages	3	6	6	1	16

51) Do you think that a CMB would improve the financing of housing in Canada particularly if developed along the lines of the model enclosed?

a. Yes	3	9	4	4	20
b. Qualified Yes	1	2	3		6
c. Uncertain	4	1	3		8
No comment		4	2	—	6

Appendix C

Project Team's Survey of Residential Mortgage Investment by Trusteed Pension Funds, April 1971

by W. R. Waters and J. V. Poapst

Notes on Survey Procedure

The questionnaire was developed for mail survey by Professors W. R. Waters and J. V. Poapst, with assistance from H. Weitz of Statistics Canada. It was distributed to representatives of trustee pension funds who attended the Second Conference on Mortgage Investments for Trustee Pension Funds convened in Ottawa on December 8, 1970, by the Honourable Robert Andras, then Federal Minister Responsible for Housing. Some individuals represented more than one fund (for example, pension fund managers from trust companies). Such individuals were asked to submit their return for a representative large fund under their management, including the fund of the employees of their own company. In addition to providing answers to the questions, respondents were asked to authorize Statistics Canada to supply the Special Project Team with financial data submitted in response to the 1967, 1968, and 1969 Surveys of Trustee Pension Funds conducted by Dominion Bureau of Statistics (now Statistics Canada). Altogether, forty-nine usable returns were received. This number represented about two-thirds of the individuals who attended the conference who were associated with one or more funds. Forty-three responses included authorization to acquire the additional information from Statistics Canada.

J.V.P.

June 1972

CLASSIFICATION OF RESPONSES, AUGUST 31, 1971

1. If you compute the rate of return earned on your fund, what valuation method do you use for fixed income securities?

Cost, book or amortized book exclusively	20
Market values if readily available, otherwise cost, book or amortized book	19
Other (explain)	8
.....	
Do not wish to disclose	0
Do not compute rate of return	2
Total	<u>49</u>

2. Please indicate the accuracy with which you can predict the fund flows listed below over the next 12 months.

	<i>Inflows from contributions (employees and employer)</i>	<i>Outflows on behalf of members</i>
Within 10%	41	34
Within 25%	6	12
Within 50%	0	0
Outside 50%	0	0
None possible	0	0
Prediction possible but do not wish to disclose	0	1
Did not answer	2	2

3. Are you prevented from investing in any of the assets listed below by the trust deed's provisions or similar formal prohibitions?

	<i>Yes</i>	<i>No</i>	<i>Do not wish to disclose</i>
NHA residential mortgages	1	48	0
Conventional residential mortgages	2	47	0
Commercial mortgages	2	47	0

4. During the next 12 months, do you expect to change the proportion of your assets held in the forms listed below by what you consider to be a significant amount?

	<i>Not applicable</i>	<i>Yes</i>	<i>No</i>	<i>Don't know</i>	<i>Do not wish to disclose</i>	<i>If "Yes"</i>			<i>Did not state</i>
						<i>Increase</i>	<i>Decrease</i>	<i>No indication</i>	
Pooled Pension and Mutual Funds	5	4	28	5	0	2	1	1	7
Bonds	0	17	25	6	0	0	17	0	1
Common Stocks	1	20	21	5	0	18	1	1	2
Preferred Stocks	2	1	37	4	0	1	0	0	5
Mortgages — insured residential	1	15	24	5	0	13	0	2	4
Mortgages — all others	0	16	24	6	0	13	1	2	3
Real Estate and Leasebacks	4	8	24	8	0	8	0	0	5
Cash and short-term investments	0	5	32	10	0	1	4	0	2

If "yes" to any of the above, please indicate why: _____

5. Please indicate how you view the following features of residential mortgages from the point of view of managing your fund.

	<i>Very unattractive</i>	<i>Unattractive</i>	<i>Not a factor</i>	<i>Attractive</i>	<i>Very attractive</i>	<i>No opinion</i>	<i>Did not state</i>
Amortization of principal	1	7	26	8	1	3	3
Yield relative to other investments	0	6	3	34	2	2	2
Fixed yield	1	7	10	25	0	3	3
Lack of equity feature	4	21	18	0	0	3	3
The need to initiate foreclosure proceedings against an individual if the mortgage is in default	11	20	15	0	0	2	1

If you wish, please comment on any of your rankings _____

6. Please comment on any other features of the mortgage instrument which you feel make investment in residential mortgages unattractive.

7. Please rank the features of the mortgage instrument you consider unattractive. Assign first ranking to the most unattractive feature.

	<i>Rank if unattractive (see Table 5-12)</i>
Amortization of principal	<hr/>
The borrower's right to call the mortgage after 5 years	<hr/>
The insurance feature of NHA mortgages	<hr/>
The time lag between commitment and investment	<hr/>
Yield relative to other investments	<hr/>
Fixed yield	<hr/>
Lack of an equity feature	<hr/>
The need to initiate foreclosure proceedings against an individual if mortgage in default	<hr/>
Others (please list) <hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

8. Please indicate how inhibiting you consider the following features of the residential mortgage market from the point of view of incorporating them in your portfolio.

	<i>Very inhib- iting</i>	<i>Some- what inhib- iting</i>	<i>Not a factor</i>	<i>No opinion</i>	<i>Did not state</i>
Absence of frequent market valuations	6	23	17	0	3
Absence of regular quotations at which transactions in substantial quantities could actually occur	11	24	11	0	3
The type or availability of organizations acting as mortgage brokers	5	14	25	2	3
The fees charged by mortgage brokers	3	9	31	3	3
The form or extent of mortgage servicing arrangements available to investors	1	4	36	5	3
The fees charged by mortgage servicing organizations	0	12	29	4	4

If you wish, please comment on any of your rankings: _____

9. Please comment on any other features of the mortgage market which you feel inhibit your level of investment in residential mortgages.

10. Please rank the various features of the residential mortgage market which you view as inhibiting. Assign first rank to the most inhibiting feature.

	<i>Rank if inhibiting (see Table 5-13)</i>
Absence of frequent market valuations	_____
Absence of regular quotations at which substantial transactions could be carried out	_____
The type or availability of organizations acting as mortgage brokers	_____
The fees charged by mortgage brokers	_____
The form or extent of mortgage servicing arrangements available to investors	_____
The fees charged by organizations providing mortgage servicing	_____
Other (please list) _____	_____
_____	_____
_____	_____
_____	_____

11. If you indicated that any of the features listed in question 7 are unattractive, or that any of the features in question 10 are inhibiting, do you feel that the yield is typically high enough to compensate?

Yes	} <i>(see Table 5-14)</i>
No	
No opinion	

12. Please indicate whether your fund holds any of the following types of assets:

	<i>None held</i>	<i>Some held</i>	<i>Holdings as % of total portfolio</i>	<i>Do not wish to disclose</i>	<i>Did not state</i>
Bonds for which no active market exists	14	30		1	4
Letter stock	37	6		0	6
Common stocks, the bulk of which are closely held or infrequently traded	31	15		0	3

13. Has anyone directly involved in the management of the fund received formal training in mortgage investment?

Yes	27
No	19
Don't know	1
Did not state	2

If "yes" please describe briefly _____

14. Considering individuals directly involved in the management of the fund, were any of those individuals active in mortgage investment or servicing in previous employment?

Yes	19
No	21
Don't know	5
Did not state	4

15. Does the management of your fund employ investment counsel having expertise in mortgage investment?

Yes	28
No	18
Do not wish to disclose	1
Did not state	2

Discussion Model for: Central Mortgage Bank

It has been proposed that we consider the establishment of a Central Mortgage Bank, to help develop the residential mortgage market in Canada.

This "discussion model" is designed to give you an opportunity to express your views to us on this matter.

There may be some aspects or implications involved in the possibility of establishing a Central Mortgage Bank that you feel are overlooked or not fully brought out in this "discussion model".

If this is your view, please add any additional thoughts or comments that you feel are relevant to a preliminary study of this kind.

I OBJECTIVES:

1. To make housing finance more attractive to investors by increasing the marketability and liquidity of residential mortgage loans and other selected instruments of housing finance, such as bonds fully secured by insured mortgage loans.
2. To make the supply of funds for housing more sensitive to changes in the demand for them; specifically to diminish the effects of monetary policy upon the supply of funds for housing.
3. To provide a medium by which the Federal Government can effectively draw upon the services of the private sector when providing funds for housing finance.

II METHODS:

1. Be prepared to buy, sell, and maintain an inventory of residential mortgages and other selected instruments in the volumes required to enable major investors (including foreign investors) who wish to change their holdings by substantial amounts to do so at reasonable speed, ease, and cost.
2. Provide continuity in secondary trading for investors dealing in residential mortgages and other selected instruments in moderate quantities.
3. Guarantee selected instruments of housing finance.
4. Be a net purchaser of residential mortgages and other selected instruments in periods when mortgage funds are scarce, and a net seller in periods when mortgage funds are plentiful.
5. Conduct arbitrage operations in mortgage loans on different types of residential property and in different localities to help provide a more integrated national market wherein differences in loan terms reflect differences in lending costs and risks.

6. Facilitate residential mortgage originating activities by making commitments to act as “buyer of last resort” against which designated mortgage originators can obtain short-term private funds.
7. Provide short-term loans against the collateral of residential mortgages and other selected instruments to help holders of residential mortgages meet their short-term liquidity requirements speedily and at a reasonable cost.
8. Individual activities of the Bank to be self-supporting — i.e., profitable, including earning of competitive rate of return on capital, without charging punitive rates or prices.

III POWERS, CENTRAL MORTGAGE BANK MAY:

- a) Transact business with Designated Correspondents.
- b) Transact business with CMHC, Bank of Canada and other government agencies.
- c) Buy and sell residential first mortgages eligible for lending under Canadian and British Insurance Companies Act.
- d) Buy and sell bonds fully secured by insured residential mortgages.
- e) Commit forward to buy and sell assets defined in c) and d) to facilitate trading activities.
- f) Buy and sell obligations of Federal and provincial governments.
- g) Buy and sell debt obligations of banks, loan companies, trust companies.
- h) Make deposits with chartered banks, trust companies, loan companies and caisses.
- i) Make loans payable on demand or within periods up to one year on security of residential mortgages.
- j) Guarantee securities fully secured by insured residential mortgages (see c).
- k) Borrow from Bank of Canada under line of credit and from Consolidated Revenue Fund.
- l) Issue short-term paper payable on demand or in maturities up to one year in capital markets.
- m) Issue long-term debt with maturities of six years and over in markets.

IV RESTRICTIONS, CENTRAL MORTGAGE BANK MAY NOT:

- a) Originate and/or service mortgage loans.
- b) Purchase second mortgages.
- c) Issue debt with term in excess of one year but under six years.
- d) Purchase obligations of municipal governments or Corporations that are not Approved Lenders.

V ASSETS:

Liquid

- a) Deposits with banks, loan and trust companies, caisses.
- b) Direct and guaranteed obligations of Federal and provincial governments.

Near Liquid

- c) Obligations of trust and loan companies.
- d) Bonds fully secured by insured residential mortgages.
- e) Loans to Approved Lenders secured on eligible residential mortgages.

Trading Assets

- f) NHA mortgages.
- g) Insured conventional residential mortgages.
- h) Eligible residential conventional mortgages. (C & B Insurance Act)

VI LIABILITIES:

- a) Loans from Bank of Canada.
- b) Debt to Consolidated Revenue Fund.
- c) Commercial paper — demand and up to one year.
- d) Long-term debt over five years.

VII EQUITY:

- a) Reserves for guarantees.
- b) Participating preferred shares to be held by Approved Lenders.
- c) Common shares held by the Government of Canada.
- d) Surplus.

Note: Maximum debt to equity ratio 25 to 1.

Appendix D

Notes on the Federal National Mortgage Association, the Government National Mortgage Association, and the Federal Home Loan Bank System in the United States

by H. H. Binhammer

I. THE FEDERAL NATIONAL MORTGAGE ASSOCIATION IN THE UNITED STATES

1. *Early History*

The Federal Home Loan Bank System was established in 1934 to provide additional liquidity for thrift and home-financing institutions to encourage them to hold a larger proportion of their portfolios in conventional residential mortgages. As the System developed, however, it came to play a more important role in providing a means, through the sale of consolidated obligations in national money and capital markets, for expanding the portfolios of its member institutions than for encouraging them to increase the proportion of mortgages held in their portfolios.

The Federal Home Loan Bank System was to concentrate its efforts in satisfying the liquidity requirements of institutions whose main activities were in the conventional residential mortgage market. On the other hand, under the National Housing Act of 1934, new institutions were to be established to encourage primary mortgage lenders to make mortgage loans insured by the Federal Housing Administration (FHA).

The FHA was authorized to charter and supervise "national mortgage associations". These were to be private institutions which would buy, hold, and sell government-insured mortgage loans originated by private lenders, with funds obtained from the sale to the public of notes, bonds, debentures, and other such obligations. Even after successive legislative changes were made to facilitate the chartering of associations and to broaden the range of activities allowed under a charter, no private initiatives were forthcoming to form national mortgage associations.

In 1935, Congress authorized the Reconstruction Finance Corporation (RFC) to purchase stock in national mortgage associations. After no im-

mediate private response, the RFC established and financed the RFC Mortgage Company. Its operations were originally limited to making loans for the construction of a variety of income-producing properties, including apartment houses, hotels, and office buildings, when funds were not available at reasonable rates from private lenders. Subsequently, it was directed to assist in the development of a secondary mortgage market by purchasing certain FHA-insured mortgages covering residential property. In 1946, it started to purchase Veterans' Administration (VA)-guaranteed mortgages. By the time the Company was dissolved in 1948, its secondary mortgage operations were far larger than its primary lending activities.

Another attempt to stimulate private investors into action was made in 1938, when the President of the United States requested the RFC to create a governmental agency to purchase eligible FHA-insured mortgages. The National Mortgage Association of Washington was chartered, later renamed the Federal National Mortgage Association (FNMA). It is now widely known as "Fannie Mae".

In an attempt to encourage residential construction and economic recovery, the FNMA started operations by purchasing only mortgages on new construction. It was authorized to make direct loans secured by first mortgages for multi-family housing. By 1948, when this authority was terminated, less than \$6 million had been placed in such direct loans. Up to 1948, the RFC Mortgage Company purchased FHA-inspired mortgages on existing housing and other mortgages not eligible for purchase by the FNMA. In its first year of operations, the FNMA purchased about 17 percent of all mortgages insured by the FHA. Between 1938 and 1942, its holdings of FHA mortgages amounted to about 6 percent to almost 8 percent of the total volume of FHA mortgages outstanding. During this period, however, FHA mortgages outstanding remained a relatively small proportion of the total outstanding mortgage debt on non-farm residential properties.

Until the war, the FNMA was a net purchaser of FHA mortgages and made few sales from its portfolio. Although it was successful with two public issues of five-year notes, the major part of its mortgage acquisitions was financed with borrowings from the Reconstruction Finance Company and directly from the Treasury.

Before the war, the FNMA did little to encourage the development of a private secondary market for FHA mortgages. But it, along with the RFC Mortgage Company, did play an important role in broadening investment in FHA mortgages. Immediately after the war, the secondary mortgage activities of the FNMA were overshadowed by its new function of providing a support facility for a variety of federal housing programs. By the end of 1947, the FNMA had disposed of 61 percent of its portfolio through sales of mortgages and another 37 percent through repayments and other credits. With its new role of providing special assistance for financing selected types of home mortgages that qualified under special programs announced from time to time by the President and the Congress, its portfolio was quickly rebuilt as it became a primary rather than a secondary source of finance for lenders, particularly mortgage companies.

The RFC Mortgage Company had supported the Veterans' Administration loan program after 1946. When the Company was terminated in 1947, the withdrawal of its support of VA-guaranteed mortgages left the VA home loan program faltering. In the following year, the FNMA was given authority to fill the gap, which it did by purchasing VA mortgages at par and by giving advance commitments to lenders. This policy left the Association at the complete mercy of the lenders; and until April 1950, when the advance commitment policy for VA loans was abandoned, the only constraint on the volume of VA mortgages purchased by the Association was the amount of funds Congress was willing to authorize. This, however, was not the end of the advance commitment technique. It was reintroduced in the following year under a new program to assist the construction of housing for migrant defense workers, military personnel, and disaster housing.

Although the attention of the FNMA was focused on satisfying the demands made on it under the Government's defense and disaster housing programs, it continued to purchase FHA-insured mortgages on an over-the-counter or immediate purchase basis. These were purchases of mortgages on existing construction which were ready for immediate delivery and purchase. Only in 1950, when construction was restricted because of the Korean War, was the Association successful in selling a substantial volume of mortgages from its portfolio. In the following year, when interest rates were allowed to move upward following the Treasury-Federal Reserve Accord, the FNMA found it increasingly difficult to sell from its portfolio in the secondary mortgage market. Moreover, with rising market rates, lenders looked increasingly toward the FNMA for support. The Association introduced several innovations to increase its resources to meet the demand and for some months during 1952, and again in 1953, suspended its over-the-counter purchases to conserve funds.

Between October 1952 and June 1953, the Association established special purchase funds to be available for over-the-counter purchases of eligible mortgages from institutions which purchased non-disaster and non-defense mortgages from its portfolio. Institutions which purchased such mortgages were issued a Purchase Receipt which permitted them to sell an equal dollar volume of mortgages to the FNMA within one year after issuance.

During the nine-month period that the Purchase Receipt Program was in effect, mortgages totaling only \$46.4 million were sold. In July 1953, the program was succeeded by another called the "one-for-one" program. It was similar to its predecessor except for one significant departure: for the first time in its history, the FNMA sold mortgages from its portfolio at a discount. At first, it stood prepared to buy at prices ranging from 96 to 100. Later, its offering price was increased to a range from 98 to 100. During the eleven months that the "one-for-one" program was in operation, the unpaid balances of the mortgages sold totaled \$514 million and the discounts absorbed by the Association amounted to \$14 million. Some of its losses were absorbed through a shift to mortgages carrying higher yields.

2. Secondary Market Operations of the FNMA, 1954 to 1968

During the early 1950s, the FNMA was increasingly criticized. Its critics objected to the fact that it was a wholly owned government corporation, that it obtained most of its funds directly from the Treasury, and that it was at times an undesirable competitor in the primary mortgage market.

Under the provisions of the Housing Act of 1954, the FNMA was re-chartered and its functions were restated. Three separate and distinct functions were defined: (1) the Management and Liquidating Functions, to dispose of its then existing mortgage portfolio; (2) the Special Assistance Functions, to help in the financing of special housing programs and to ameliorate the effects on the housing market of unfavorable economic conditions; and (3) the Secondary Mortgage Operations, to provide supplementary assistance to the secondary market for home mortgages.

The 1954 legislative changes were intended to allow the FNMA to provide a more realistic secondary market facility which would eventually be entirely privately financed. The Association's original capital and paid-in surplus, amounting to \$21 million, became part of its capitalization applicable solely to its secondary mortgage operations. Additional public funds were to be provided from the sale of non-voting preferred stock to the Secretary of the Treasury.

From 1954 to 1968, funds required to finance the FNMA's Secondary Mortgage Operations were, as a general rule, obtained principally from the sale of its debentures and short-term discount notes in the money and capital markets. Other sources of funds for its mortgage purchasing operations were interim borrowings from the Secretary of the Treasury; non-fundable contributions to capital (common stock) by organizations which sold mortgages or borrowed from the FNMA; sales of common shares in return for appropriate payments into capital and surplus; income from its operations, particularly from fees paid for the use of its facility; portfolio liquidation; and sales of trust certificates of beneficial interest in mortgages held by the FNMA and set aside for such purposes.

When the FNMA was rechartered in 1954, the maximum amount of its own obligations it could have outstanding at any one time was set at ten times the sum of its capital and surplus. In 1956, its borrowing leverage was increased to fifteen to one, and in 1968 to twenty to one.

Starting in 1956, the FNMA issued its debentures in every year except 1963 and 1964. Most of the issues had maturities of less than one year; in 1962, a fifteen-year issue was sold. In 1966, when credit conditions were extremely tight, the FNMA sold \$1.7 billion of its debentures in the money and capital markets. By the end of 1968, the total amount of debentures that had been issued was \$11.2 billion, of which \$3.4 billion remained outstanding.

Short-term discount notes, similar to commercial paper, were first offered in 1960. These notes were tailored to the individual needs of corporate, institutional, and other investors and sold at published rates within a maturity range of 30 to 270 days. By the end of 1968, the FNMA had

issued short-term discount notes amounting to \$16.6 billion, of which \$2.2 billion remained outstanding.

The sale of discount notes provided the FNMA with a greater degree of operational flexibility. It was relieved of the necessity of reinvesting funds received until outstanding debentures matured. A "reserve" of short-term borrowings allowed the FNMA more flexibility to go into the intermediate-term and long-term markets when rates were favorable and to hold off when conditions were unfavorable for such financing. Moreover, when short rates were lower than long rates, it reduced its cost of borrowing. Finally, the sale of discount notes reduced reliance on the Treasury by the FNMA to borrow funds in the interim between debenture issues.

As a first step toward transforming the Secondary Mortgage Operations from public to private ownership, the 1954 recharter Act specified that sellers of mortgages to the FNMA were required to purchase its non-voting common stock in an amount equal to 3 percent of the outstanding balance of mortgages sold to it. In 1957, the statutory limits were repealed and the FNMA was authorized to vary the requirement as long as it was no less than one percent and no more than 2 percent. In making the changes, the FNMA was to take into consideration conditions in the mortgage market and the general economy. Institutions which borrowed from the FNMA on the security of FHA-insured and VA-guaranteed mortgages, first allowed in 1961, were also required to make capital contributions. These were made in an amount equal to not more than one-half of one percent of the amounts borrowed.

By the end of 1967, on the eve of its second major transformation, the Secondary Mortgage Operations of the FNMA were financed almost entirely with private funds. Its preferred stock outstanding to the Treasury amounted to \$142 million and the non-voting common stock held privately, to \$123 million. The total amount of its outstanding debentures and discount notes was almost \$5 billion.

The FNMA purchased mortgages under its Secondary Market Operations on an over-the-counter or immediate purchase basis, including purchase options, and under standby commitment contracts. Its charter required it to confine its purchases to mortgages insured by the Federal Housing Administration, or guaranteed or insured by the Veterans' Administration after August 1, 1964. Mortgages purchased were to be of a quality, type, and class that generally met the purchase standards imposed by private institutional mortgage investors. Initially, there was a statutory requirement that the principal obligation of a mortgage purchased under the Secondary Market Operations should not exceed \$20,000. The Housing Act of 1964 eliminated this requirement, and thereafter purchase limitations were set administratively.

In an attempt to provide a more effective secondary market facility, the FNMA introduced a purchase option and standby commitment procedure in 1956. Under the purchase option procedure, the FNMA purchased mortgages from a seller on an immediate purchase basis at current market prices and concurrently permitted the seller to obtain an option

under which he could repurchase the mortgages at the prices paid for them by the FNMA. In 1964, the initial option period was increased from nine months to twelve months and the purchase option fee was increased from one-half of one percent to one percent of the unpaid principal amount of the mortgages involved.

The purchase option procedure allowed mortgage sellers in need of funds to raise immediate cash on their mortgages in larger amounts than were available under customary borrowing and discounting arrangements. Moreover, it provided sellers with an additional period of time in which they could try to find buyers, other than the FNMA, for the mortgages they wished to sell.

The stand-by commitment procedure was introduced to make it easier for builders to obtain interim financing and to start construction. It involved the FNMA in giving advance commitments to mortgage sellers guaranteeing a minimum future purchase price during a specified contract period. Commitments were issued at prices sufficient to facilitate home financing but sufficiently below regular immediate purchase prices to prevent excessive use of the facility. While at first commitments covered only mortgages on new construction (prior to commencement of construction), mortgages on existing construction (construction in process or completed) and home improvements were included later. The stand-by commitment procedure provided for twelve-month contracts on one-to-four-family housing relating to new construction and home improvements, and for six-month contracts in respect to existing construction. The commitment term in respect to multi-family housing mortgages was twenty-four months for both new and existing construction and twelve months for home improvement. Sellers wishing to obtain standby commitments were required to pay a non-refundable commitment fee of one percent of the principal amount of the mortgages involved and to pay into capital one-half of one percent with respect to subscriptions for FNMA's common stock. If mortgages were delivered to the FNMA under the commitments, an equal additional percentage payment had to be made into capital.

The standby commitment procedure served two purposes. In the case of new construction, it enabled sellers of mortgages to obtain construction funds from private lenders with the expectation that mortgages could be sold in the secondary market when construction was completed and mortgages were ready for delivery. In the case of existing construction, it provided mortgage sellers with the assurance of permanent financing.

Before 1954, the FNMA purchased residential mortgages at par. Mortgages purchased were usually those bearing low interest rates, which, during periods of rising rates, were priced below par in the open market. Hence, by offering to pay par, the FNMA inevitably assumed a role similar to that of a direct investor. To avoid excessive use of the FNMA, following its rechartering in 1954, its purchase prices were required by law to be set at the "market prices". Insofar as the schedules of prices announced by the FNMA generally lagged behind market prices, it continued to give direct rather than supplementary support to the secondary mortgage market.

Moreover, since most of its purchases were made from mortgage companies, it continued to be a primary source of funds to these companies.

The Housing Act of 1961 authorized the FNMA to make bank-type short-term loans secured by FHA-insured or VA-guaranteed mortgages. Originally, the loan amount had been legislatively established at 80 percent of the aggregate unpaid principal balance and loans had to mature within twelve months. Extension renewals also were restricted to twelve months. In 1964, the allowable ratio for loans was increased to 90 percent. Loans were intended to further home construction by providing a degree of liquidity for mortgage investments and, generally, to provide supplementary assistance to the secondary mortgage market. Little use was made of this facility, probably because cheaper alternative sources of similar funds were available elsewhere. Borrowers were obliged to pay an application fee which was non-refundable if the loan was approved, and were required to make a contribution to capital equal to no more than one-half of one percent of the amounts borrowed. The FNMA intentionally set its charges relatively high with the objective of preventing excessive use of the facility and of assuring that the operations would be fully self-supporting.

From 1954 to the end of 1967, the secondary mortgage portfolio of the FNMA grew to \$5.5 billion. Over this period, its gross purchases amounted to \$9.4 billion and its gross sales to \$2.3 billion. Sales exceeded purchases during only two years, 1958 and 1963. Variations in total sales and purchases reflected changing credit conditions: during periods of monetary restraint, sales declined and purchases increased; and during periods of monetary ease, the opposite was the case. During periods when monetary and fiscal policy called for restraint, the FNMA was reluctant to lower its offer prices significantly because its *raison d'être* was to provide stability to the secondary mortgage market. On the other hand, it was reluctant to incur a loss on mortgage sales because of its statutory requirement that its Secondary Market Operations be self-supporting.

3. The Federal National Mortgage Association since 1968

The Housing and Urban Development Act of 1968 partitioned the FNMA into two corporations effective September 1, 1968. One of these two corporations, known as the Government National Mortgage Association (GNMA), retained the Management and Liquidation Functions and the Special Assistance Functions, the two government-financed portions of the previously existing FNMA.

The other corporation, which kept the name of the Federal National Mortgage Association and its capital structure, retained the Secondary Market Operations. It became a government-sponsored, privately owned corporation subject to regulation by the Secretary of Housing and Urban Development. At the time of partitioning, the public held about \$140 million of non-voting common stock and the Secretary of the Treasury about \$160 million of preferred stock. The reconstituted corporation immediately sold an issue of subordinate capital debentures and used funds realized from this issue to retire all the outstanding preferred stock, making the common shareholders the sole owners of the corporation.

Under the terms of the 1968 legislation, when one-third of the outstanding shares were owned by persons or institutions in the mortgage lending, home building, and real estate or related businesses (in any event no later than May 1, 1973), the Board of Directors of the FNMA was to be dominated by its shareholders. This condition was met in February 1970, and the Board has subsequently been composed of fifteen members of whom ten are elected by the shareholders and five are appointed by the President of the United States.

Those who avail themselves of the services of the FNMA are required to contribute to its capital, a procedure begun in 1954 as a first step toward transforming the Association to private ownership. Legislation requires each mortgage seller to make payment of non-refundable capital contributions equal to no more than 2 percent and no less than one percent of the unpaid principal amounts of mortgages purchased or to be purchased by the Association. Also, each servicer of the FNMA's mortgages must own a minimum amount of its stock. In addition to the required issue of common stock, the Association may issue its stock for sale in the capital markets. Effective July 1, 1970, the FNMA split its stock four for one to broaden its market and to enlarge the alternatives for increasing equity as its activity expands.¹ In December 1969, the FNMA's maximum debt to capital ratio was increased from 20 to 1 to 25 to 1.

The FNMA is now a privately owned and financed corporation which, in the public interest, is to maintain the liquidity and stability of the home mortgage market. The Secretary of Housing and Urban Development has broader powers to regulate the Association than is the case of other private institutions operating under other jurisdictions. For example, the Secretary may request the FNMA to devote a certain portion of its portfolio to the financing of housing projects and family homes for low or moderate-income families. The Secretary's authority is limited, however, to the extent that the corporation must at all times be allowed to make a reasonable profit for its shareholders.

Free from the former constraints imposed by the federal budget, the FNMA became an aggressive participant in the secondary mortgage market. The previous system of government-administered prices for mortgage purchases and sales which had given the FNMA no control over volume was abandoned. Substituted in its place was a weekly or bi-weekly "auction" Free Market System, which allows the corporation to determine the volume and lets the market fix the price.

Under the auction system for FHA-insured and VA-guaranteed mortgages, the FNMA announces a predetermined total dollar amount of mortgage commitments to be issued for the next auction, based upon estimated market need. Bidders quote prices at which they are willing to sell stated amounts of existing or yet-to-be-created mortgages over future

¹ On August 7, 1970, the FNMA filed an application with the New York Stock Exchange to list its common stock. The price of the corporation's stock rose from \$70 in early 1968 to \$245 in June 1969. It slipped to \$190 in July as the rest of the market plummeted, but recovered to \$220 during the latter part of the year. In 1970, its price slipped again and was \$130 prior to the four-for-one split in July.

periods of three, six, twelve, fifteen, or eighteen months. Successful bids result in a commitment from the FNMA that it will stand ready to purchase the mortgages involved, at the price quoted, during the period the bidder has selected. Under this option contract system, successful bidders do not have to sell to the FNMA but are free to place their mortgages elsewhere if they subsequently secure better financing terms. The FNMA charges a commitment fee, varying according to the commitment term, of from one-half of one percent to one and one-half percent of the amount of the funds committed.

Under the Free Market System, the FNMA serves as a lender of last resort of specified amounts announced regularly.² Commercial banks, savings and loan associations, mortgage companies, and other organizations have availed themselves of this facility.³ When they exercise their right under commitment to sell to the FNMA, the sale results in immediate funds to replenish their supply of capital, permitting them to extend further credit to the housing industry by financing additional mortgages. Moreover, it allows institutions to shift quickly out of mortgages into other assets. Acceptance of the FNMA's Free Market System is reflected in its use in 1969, when credit conditions were extremely tight. During this period, the FNMA issued commitments totaling \$6.6 billion and purchased \$4.2 billion of mortgages. This was more than twice the previous record volume established in 1966, another period when credit was extremely constrained. During 1969, one-fourth of the net increase in the dollar volume of mortgages on one-to-four-family units was absorbed by the FNMA. Moreover, in the last quarter of 1969, the FNMA absorbed 50 percent of the increase in all one-to-four-family mortgages and about a third of all residential mortgages. By comparison, in the years before 1969, the purchase of mortgages in any one year by the FNMA rarely exceeded 5 percent of the increase on one-to-four-family units.

In June 1969, the FNMA started to participate in construction loans on multi-family projects. Initially, this program was limited to projects subsidized as to interest rates or rents by the Federal Government. Subsequently, the program was broadened to include all multi-family construction. Construction loans have been made only on mortgages for which the

² In response to a question at the Second Annual Meeting of Stockholders concerning the determinants of the timing of auctions and the amounts offered, the following answer was given:

"Number one, we must bear in mind at all times that even with our public purpose we are expected to operate on our own funds. Also, we must watch very carefully not to pre-empt the entire market. We want to encourage traditional lenders to get back into the market and provide needed mortgage funds. Our primary responsibility is one of maintaining liquidity and stability, not proceeding to corner the market.

We attempt to respond to what the market place is telling us in terms of the volumes of bids that are tendered to us. Of course, we do like to see bids tendered to us in varying amounts that relate to other developments in the capital market, and we do respond to what the market place tells us."

Report of the Annual Meeting of Stockholders, Federal National Mortgage Association, May 21, 1970.

³ Mortgage companies, commonly referred to as mortgage bankers, originate about 85 percent of all loans purchased by the FNMA. As a result, they hold an estimated 20 percent to 25 percent of all outstanding FNMA stock.

corporation has pledged permanent financing. To preclude competition with commercial lenders, the FNMA has usually participated in making construction loans only at the request of a lender. In addition to participating in construction loans, the corporation has made loans secured by mortgages. Both types of loans have represented an insignificant proportion of its overall activities.

During 1969, the FNMA, in cooperation with the Department of Housing and Urban Development, initiated a special program to maintain par prices for mortgages on multi-family projects which are subject to interest rate or rent supplement subsidies from the Government. During the following year, federally assisted single-family units came under a similar⁴ program. The Government National Mortgage Association assumes the risk of providing the par prices at any time when the FNMA's commitment price is below par.

The Emergency Housing Act of 1970 authorized the FNMA to purchase conventional mortgages. Soon thereafter, the corporation announced the conditions under which it was prepared to purchase conventional mortgages, and its intention to make short-term loans on the security of such mortgages and, on a negotiated basis, to purchase participations.

The FNMA purchases conventional mortgages under a Free Market auction similar to, but conducted separately from, the Free Market auction for government-backed mortgages. The conventional mortgage auction is conducted on the basis of gross yield bids rather than mortgage prices. Non-competitive bids—that is, where the sellers agree to the average yield of all accepted bids—are considered in relation to the amount of mortgage funds the corporation has available for the auction period. Initially, only six-month commitments were made and offers of less than \$10,000 were not considered. Mortgages dated more than one year prior to the date of final disbursement of loan proceeds were not eligible for purchase.⁴ As a condition of entering a competitive offer, each seller pledges to pay a non-refundable offer fee equal to one-hundredth of one percent of the amount of the offer. Upon acceptance of an offer by the FNMA, the seller pays a non-refundable commitment fee in the amount of three-quarters of one percent for each six-month commitment. Furthermore, when a mortgage is delivered under an FNMA commitment, the seller must subscribe to an additional amount of common stock equal to one-half of one percent of the unpaid principal balance of the mortgage.

Sellers are normally expected to service the mortgages they sell.⁵ Compensation is paid by the FNMA for these services equal to three-eighths of one percent per annum computed on the principal amount.

⁴ The remaining term of mortgages may not be less than ten years and the original term may not exceed thirty years. Normally, the unpaid balance of the mortgage at the time of delivery to the FNMA may not be less than \$10,000 or more than \$33,000. The loan to value ratio may not exceed 75 percent, except that the ratio may go up to 90 percent if the unpaid principal in excess of 75 percent is insured or guaranteed by an acceptable insurer, or if the seller agrees to repurchase the mortgage if it goes into default while the unpaid principal is in excess of the 75 percent limit.

⁵ Multi-family housing mortgages owned by the FNMA are serviced direct.

Servicers of FNMA mortgages must own FNMA stock equal to one percent of the total of the unpaid principal balances on the mortgages being serviced.⁶

The FNMA now finances its activities with non-public funds. The Secretary of the Treasury is authorized to make direct loans to it of up to \$2,250 million. The corporation's former reliance on interim borrowing from the Treasury ended in July 1969, when it established a line of credit of \$150 million, increased to \$300 million in January 1970, with a nationwide group of commercial banks.

The major source of funds for the FNMA is the sale of its obligations. The rates, maturities, and timing of all obligations must have the prior approval of the Secretary of the Treasury. The Secretary of Housing and Urban Development is required to approve the total amount of outstanding obligations and the ratio of aggregate debt to capital.

The FNMA has raised most of its funds through the sale of ordinary debentures. At the end of June 1970, the corporation had outstanding debentures due within one year amounting to \$3.6 billion and due after one year amounting to \$5.6 billion. At the same time, its short-term discounting notes (30 to 270 days) outstanding amounted to \$3.2 billion.

The corporation first issued subordinate capital debentures to finance the retirement of the preferred stock held by the Treasury. Early in 1970, it issued \$200 million subordinate debenture shares maturing in five years, increasing the total amount of such debentures outstanding to \$450 million. Under its charter, this type of debenture is part of the base that determines its borrowing capacity.⁷

The total amount of subordinate obligations outstanding at any one time may not exceed twice the sum of the corporation's outstanding common stock, surplus, and retained earnings.

On June 1, 1970, the FNMA issued mortgage-backed bonds for the first time. These are guaranteed by the Government National Mortgage Association and hence by the Government of the United States. The successful marketing of mortgage-backed bonds aggregating \$400 million may represent a major turning point for the corporation, in that further sales may allow it to tap sources of funds which traditionally have not been open to residential mortgage financing.

The FNMA's greater flexibility in its operations, free from the constraints of the Government's budget, is reflected in its activities during the extremely tight credit conditions in 1969. Total housing starts, after reaching a peak in the first quarter of 1969, declined by almost one-fourth by the final quarter of the year. Primarily as a result of purchases by the corporation, however, FHA and VA-financed starts rose by 20 percent in the

⁶ At the option of the seller/servicer, the minimum may be reduced to seven-tenths of one percent by offering excess stock back to the FNMA for repurchase at the issue price.

⁷ Its debt to capital ratio has been a continuing constraint on its operations and had to be increased twice in a period of about one year. In addition to the sale of subordinate debentures, the corporation hopes to expand its capital base through the sale of its stock to the public and perhaps through the issuance of convertible debentures.

same period. At times, the FNMA was granting commitments at a rate of \$10 billion a year.

The FNMA's mortgage operations during 1969 were strongly contracyclical relative to the residential mortgage market but strongly pro-cyclical relative to economic conditions generally. Its activities not only prevented what probably would have been a decline in FHA and VA-financed starts, but also allowed an actual increase in starts. Insofar as there was little criticism of this policy, it must be assumed that the Government attached a relatively high social priority to residential construction and was willing to trade off additional pressures on general economic expansion that might have resulted.

To finance its additional mortgage purchases, the FNMA was continuously in the capital markets. With market reluctance to purchase long-term debt, its issues had to be concentrated in the short end of the market. By mid-1970, the average length of the FNMA's debt was one year and five months. The average for debentures was one year and ten months and the average for discount notes, three months.

From mid-1969 to early 1970, the FNMA's net borrowing costs exceeded its net returns on new mortgage acquisitions. Although the corporation was subsequently able to maintain a positive rate spread between acquisitions and new debt, it still was unable to earn a profit on its portfolio. It has, however, been able to finance its overall operations with income from commitment and other fees over the period.

II. THE GOVERNMENT NATIONAL MORTGAGE ASSOCIATION

The Government National Mortgage Association (GNMA) was formed in 1968 to take over the former federally financed Special Assistance Functions and Management and Liquidity Functions of the FNMA.

The Special Assistance Functions, which had been given a separate status within the FNMA in 1954, had become before this time an important means for employing the Association for financing selected types of housing that qualified under special programs. When the FNMA was rechartered in 1954, provision was also made for special assistance through the purchase of home mortgages generally as a means of retarding or stopping a decline in mortgage lending and home-building activities which materially threaten the stability of the national economy. Under this provision, the Federal Government directed the FNMA in 1958 to purchase up to \$1 billion in mortgages to support its anti-recessionary programs.

Funds required for financing the Special Assistance Functions of the FNMA before 1968, and now of the GNMA, were obtained principally by borrowings from the Secretary of the Treasury. Other sources of funds included net proceeds from operations, portfolio liquidations, and sales of beneficial interests or participations in mortgages. Most of the funds required to finance the Special Assistance Functions have been borrowed from the Treasury. By the end of August 1968, the aggregate amount of outstanding special assistance authority subject to direction of the Congress and the President of the United States was \$5 billion.

Purchases of mortgages authorized under the Special Assistance Functions have been related to urban renewal projects, cooperative housing, housing for the armed forces, low and moderate-priced housing, and housing for elderly persons. After 1954, mortgages were bought on an immediate purchase basis and under advance commitment contracts. After 1966, advance commitments were allowed to participate in making insured advances on certain mortgages during construction. In August 1968, participations were limited to 95 percent of the amount of each advance involved. No loans were made as of the end of August 1968.

The 1954 recharter Act allowed the FNMA administratively to set the prices it offered to purchase mortgages. This did not, however, preclude the setting of minimum prices by statute, which was the case in 1956 and 1957.

As a general policy, the FNMA followed a practice of setting prices that permitted it to operate an "open window" but at a penalty. Fees and charges imposed by the FNMA represented additional penalties. Sellers of mortgages to the FNMA under its Special Assistance Functions, as well as its Liquidity Functions, were not required or permitted to purchase its common stock.

To ensure that mortgages purchased under the Special Assistance Functions are restricted to the types of housing the Government wishes to promote, limitations have been placed on the maximum size of individual mortgages and on the age of mortgages eligible for purchase.

The Management and Liquidating Functions which had also been given a separate status within the FNMA in 1954 are now the responsibility of the GNMA. In 1954, the mortgage portfolio held under the Management and Liquidating Functions amounted to \$2.5 billion. Subsequently, the mortgage holdings of other government departments and agencies were purchased by the FNMA. All these mortgages were to be managed and liquidated in an orderly manner, with a minimum adverse effect upon the local mortgage market and with minimum loss to the Federal Government.

Funds required for financing the Management and Liquidity Functions were generally obtained by borrowings from the Secretary of the Treasury, from proceeds of operations, from portfolio liquidation including sales, from sales of Management and Liquidating Functions obligations to private investors, and from sales of beneficial interests or participations in mortgages and other obligations. Sales of mortgages from the portfolio to private investors were insignificant because the FNMA was reluctant to take the losses which would have resulted by setting prices at which the market would have absorbed the mortgages.

In 1955, 1957, and 1958, notes with maturities from eight months to three years were sold. The aggregate amount of these issues was \$2.2 billion. During 1959 and 1960, the Management and Liquidating Functions portfolio was reduced by \$319 million through exchanging certain mortgages for Treasury bonds at competitive prices.

The Housing Act of 1964 for the first time vested fiduciary powers in the FNMA under its Management and Liquidating Functions, with the

objective of facilitating the liquidation of its own mortgages and those of any Federal Government agency or instrumentality. The fiduciary powers were to be employed through the sale of beneficial interests, or participations, to substitute the funds of private investors for the United States Treasury's investment in mortgages held by the FNMA and other government agencies and instrumentalities. It was hoped that participation certificates would be attractive for investment by pension and retirement funds and by others who were ordinarily not interested in mortgages as a form of long-term investment.

As of August 31, 1968, four separate trusts had been created pursuant to trust indentures entered into between the FNMA as trustee and various government departments and agencies as trustors. Fourteen issues of participating certificates aggregating \$9.6 billion had been issued by the FNMA as trustee, of which \$9.2 billion remained outstanding.

Under its fiduciary powers, the FNMA sold participations in the interest and principal payments derived from pooled mortgages to private investors in the form of participation certificates. Payments received by the trustors in the form of interest and principal payments on the mortgages comprising the pool were remitted to the FNMA as trustee and were used to make interest payments on the participation certificates and to provide for their redemption at maturity. In 1964, when participation certificates were first sold, they had maturities of up to fifteen years. In subsequent years, however, maturities were generally only one year.

The Housing and Urban Development Act of 1968 empowered the newly established GNMA to guarantee bonds issued by the FNMA or other approved issuers based on, or backed by, a pool of federally insured or guaranteed mortgages. It is hoped that the sale of mortgage-backed securities will accomplish two objectives: increase the potential liquidity of the portfolio of mortgage lending institutions, and provide an attractive investment alternative for other long-term investors, such as pension funds which typically have not placed funds directly in mortgages.

The operations assumed by the GNMA from the FNMA in 1968 are in many ways similar to those of CMHC in Canada. The Special Assistance Functions of the GNMA are in many respects the same as the direct lending operations of CMHC. Both are government financed. The main difference in the operations of these two institutions is that the GNMA provides support to the mortgage market by purchasing mortgages originated by others, whereas CMHC provides support through direct lending. The Americans originally introduced the purchase procedure because it was hoped that mortgages originated under special assistance programs could be sold to private lenders when their investment performance was demonstrated. General marketability for these mortgages has failed to develop, and as a result the FNMA and now the GNMA have become what amounts to direct lenders with government funds. The Canadian procedure of direct lending appears to be a more efficient method to allocate mortgage funds because it allows CMHC more control over their use.

As for the Management and Liquidating Function of the GNMA, its

predecessor, the FNMA, was far more innovative in its attempt to liquidate its portfolio than CMHC has been. Differences in the terms of reference of these institutions may explain the lack of initiative by CMHC actively to liquidate its portfolio. In the United States, the Federal Government has considered itself a reluctant holder of residential mortgages. The GNMA is directed by its legislation "to assure that, to the maximum extent and as rapidly as possible, private financing will be substituted for Treasury borrowings". CMHC in Canada has no such directive.

To attract more savings into the residential mortgage market, particularly pension and retirement funds, CMHC might sell beneficial interests or participations in its mortgage portfolio. Furthermore, the Government's Securities Investment Account and the Government Purchase Fund might be used to provide additional funds to CMHC when the Federal Government's cash balances are low and it is reluctant to go to an already congested capital market. In 1966, for example, Federal Government Trust Funds in the United States purchased sizable amounts of federal agency securities, reducing their need to go to the market and thereby exerting additional pressure on it.

The Housing and Urban Development Act of 1968 authorized the GNMA to guarantee securities collateralized by FHA, VA, and Farmers Administration mortgages. Early in 1970, the GNMA launched a new program under which it guarantees mortgage-backed securities issued by FHA-approved lenders. These securities are a new vehicle designed to attract new sources of capital, especially pension funds, into housing.

Two types of securities may be issued—pass-through and bond-type securities.⁸ At first, straight pass-through securities were issued where payments of principal and interest are passed on to the investor each month as collected. These were not attractive to many investors because of possible delays in mortgage payments due to delinquencies and foreclosures. Subsequently, most issues were so-called modified pass-through securities, where the investor is assured of a minimum yield in monthly payments of principal and interest, whether or not such amounts are collected from the mortgages. If necessary, the issuer makes cash advances to keep up the payments to investors if payments are delinquent. The issuer has forty-five days after payments are due from the mortgagor before he makes his monthly payments to the investor. If at any time the issuer is unable to make the necessary cash advances, he can notify the GNMA to take over the obligation. The GNMA may also take over the whole pool of mortgages and its servicing and continue payments to the investor without further recourse to the issuer for losses involved.

The sale of mortgage-backed securities transfers to the certificate holders the equitable ownership in each of the mortgages in the pool. The issuer has only a contractual right to service the mortgages for a specified fee. The minimum denomination for an instrument was at first \$50,000 but

⁸ See Woodward Kingman, "We Round Out our First Year with Sales over \$2 Billion", *The Mortgage Banker*, May 1971, pp. 14-23. Phillip E. Kidd, "One Year Old and Going Strong!", *The Mortgage Banker*, May 1971.

was subsequently reduced to \$25,000. Smaller issues are not permitted in order to avoid disintermediation by the thrift institutions. The issuer deposits mortgages with an approved custodian, usually his local bank, and the GNMA sends guaranteed mortgage-backed certificates to the issuer, who delivers them to the investor.

Bond-type securities differ from the pass-through type in that their principal is paid at maturity with interest paid semi-annually. This presents a problem to the issuer, in that mortgages collateralizing the bonds can be prepaid and these prepayments must be reinvested rather than passed through in order to keep to the coupon payments due to the bond holders. The issuer of mortgage-backed bonds may face considerable risk. If interest rates decline sharply, he may not be able to reinvest his cash at the same rate as on the bond coupons. The issuer of GNMA bonds must be large enough to withstand such risks. The GNMA has set minimum net worth requirements for issuers at \$50 million. Moreover, it requires that each issue be in a minimum amount of \$100 million if a single maturity, or \$200 million if more than one maturity. Up to May 1970, only the FNMA and the Federal Home Loan Mortgage Corporation issued such bonds.

GNMA securities are competitive in yield with high-grade corporate securities. They carry the guarantee of the Government National Mortgage Association and the full faith and credit of the United States Government. An effective secondary market for mortgage-backed securities is developing. There is every indication that mortgage-backed securities may become a major vehicle for investment in housing by the private sector in the United States.

III. THE FEDERAL HOME LOAN BANK SYSTEM

1. *History*

Following the First World War, the American Congress first considered proposals for a credit facility to support the residential mortgage market. It was not until the economic depression of the 1930s, however, that legislation was enacted. At that time, the builders proposed the establishment of central mortgage banks which would rediscount mortgage loans in much the same way as the Federal Reserve Banks rediscounted commercial paper. The main intent of central mortgage banks was to provide a mechanism for increasing the liquidity of mortgages and thereby to create a national mortgage market. The savings and loan associations, on the other hand, proposed a mechanism which would give traditional mortgage lenders the ability to satisfy the demands for mortgage loans rather than one which focused on increasing the marketability of mortgage instruments.

Legislation in 1932 provided for the establishment of twelve regional Federal Home Loan Banks to create a permanent credit reservoir for thrift and home financing institutions. Authority and responsibility for establishing these banks was vested with the new Home Loan Bank Board. This Board is composed of three members appointed by the President of the United States, with the advice and consent of the Senate, for full or

expired portions of four-year terms. The minimum capital for each Federal Home Loan Bank was originally set at \$5 million. It was anticipated that in the course of time all the capital would be supplied by member institutions; but to launch the banks, the Treasury was authorized to purchase a total of \$125 million of their capital stock. A Treasury subscription of approximately that amount was made. By mid-1951, all the government-owned stock had been retired and the banks became entirely private, owned by member institutions.

Member institutions are now required to subscribe to the stock of the Federal Home Loan Banks in their respective districts equal to at least one percent of their home mortgage loans. A member institution not permitted by state law to own stock may hold membership by making a deposit with a Home Loan Bank equivalent in amount to the required stock subscription. All federal savings and loan associations must be members of the Federal Home Loan Banks of their respective districts; and state-chartered institutions engaged in the field of real estate mortgage finance, including savings and loan associations, may be admitted to membership on a voluntary basis.

In 1933, as part of the Home Owners' Loan Act, Congress made provision for the chartering of federal savings and loan associations by the Home Loan Bank Board. The purpose was to encourage the establishment of thrift and home financing facilities on a sound basis. To assist in their development, the Treasury made share investments in federal savings and loan associations. The Home Owners' Loan Corporation (HOLC) established in 1933 (and discontinued in 1951) also was an important source of financial support through share investment.⁹ All the Government's share investment has long since been repaid, so that not only the Home Loan Banks, but also their members, are strictly privately owned. The Federal Home Loan Bank System, which is made up of the Federal Home Loan Bank Board, the regional Federal Home Loan Banks, and their member institutions (primarily savings and loan associations), is a quasi-public system. Although owned privately, it is closely controlled by the Government through its appointment of Board members, who in turn appoint a specified number of the directors of the regional banks. The Federal Government provides a back-stop to the System by standing ready in an emergency to buy \$4 billion of its obligations.

The Federal Savings and Loan Insurance Corporation, established as part of the National Housing Act in 1934, is under the direction of the Federal Home Loan Bank Board. The Corporation, similar to the Canada and the Quebec Deposit Insurance Systems, insures the safety of savings held with member institutions. Unlike Canadian deposit insurance systems, the Corporation is privately owned, but the Government stands ready in an emergency to acquire up to \$750 million of securities that the Corporation might offer.

⁹ The purpose of the HOLC was to make loans to home owners in danger of losing their properties through foreclosures, and to prevent continued liquidation of real estate credits by lending institutions. It refinanced defaulted home loans on a long-term, amortized basis at relatively low rates of interest.

Unlike the Federal Reserve System or the Bank of Canada, which provide lender of last resort privileges to commercial banks, the Federal Home Loan Banks have operated throughout most of their history as lenders of first resort to their members. It was not until the 1960s that the Federal Home Loan Board seriously considered its role in making advances not only to include the provision of secondary liquidity to member institutions, but also to control their liquidity as a tool for overall stabilization policy.

The Banks make two basic types of advances: short-term advances to allow the member institutions to adjust their portfolios to unanticipated or unusually heavy withdrawals of savings and seasonal demands for funds, and long-term advances to allow institutions to expand their portfolios.¹⁰

It is argued that with the availability of short-term advances, thrift institutions can concentrate a larger proportion of their portfolios in mortgage loans because it lessens the need to diversify their portfolios to include other more marketable assets. It is also argued that a short-term advance facility helps institutions to stabilize their flow of mortgage funds. The seasonal rise and fall in the demand for mortgage and construction loans differ from the seasonal change in the net inflow of savings to the institutions. Short-term advances allow the institutions to smooth out seasonal fluctuations in their operations. Aside from the seasonal asymmetry between outflows and inflows of the institutions, there is the asymmetry inherent in the mortgage commitment process. Mortgage commitments have to be made on anticipated savings because of the long lead-time schedule involved in the commitment-take-down-outpayment process of residential financing. Insofar as the advance facility compensates for any short-fall in anticipated savings, lenders are induced to supply a more continuous flow of residential mortgage credit.

While short-term advances have usually been made with a maximum maturity of twelve months, some banks have made long-term advances with maturities of up to ten years. Long-term advances are made to allow institutions to expand their portfolios. They are made by the Home Loan Banks to allow member institutions to supplement savings when, as a result of the development or growth of a community, the demand for home financing exceeds local funds available for this purpose. In this way, the Home Loan Bank System facilitates the flow of funds for mortgage investment from areas with a plentiful supply of capital to those with less adequate supply. As is explained below, the Banks sell their consolidated obligations in the national capital markets. Insofar as these are purchased by lenders in surplus capital areas and are used to provide advances in deficit capital areas, a more equitable distribution of mortgage funds is available.

Both short-term and long-term advances also have been made to help to moderate imbalances between the supply of funds and the demand for home financing resulting from the perverse effect of cyclical movements in the economy. For example, in 1955 and in 1959, when the demand for home loans and loan commitments increased faster than the flow of savings

¹⁰ Before the establishment of the Home Owners' Loan Act of 1933, the Federal Home Loan Banks also were authorized to make direct loans to individuals.

into member institutions, the Home Loan Banks made advances to members to assist them in meeting the demands for home financing.

During the 1960s, the Federal Home Loan Banks moved from a traditional "accommodative" posture to one which was more "discretionary". While they stood prepared to make funds readily available as needed to cover withdrawals of savings in accordance with their function of providing a secondary reserve facility, they encouraged members to arrange cash flows so as to meet a reasonable amount of withdrawals more adequately. Withdrawal advances were restricted to ninety-day renewable notes and were repayable as soon as feasible from any net savings inflow to the borrower. The shorter repayment period was introduced to allow the Banks closer scrutiny over the use to which advances were put.

Since early 1966, advances to members to expand their portfolios have been limited to a one-year term, except when consolidation of debt is involved. This new policy was introduced to discourage continuous and large borrowings for portfolio expansion. Moreover, advances are not to be used primarily to take advantage of rate differentials, to purchase securities (other than to re-establish normal liquidity), or to purchase mortgage loans in the secondary market.

Member institutions are given lines of credit for advances with their respective Home Loan Banks, the maximum amount of which is determined by a member's ratio of "scheduled items"—that is, loans and other assets which are considered sub-standard. These maximum limits are reviewed and set at least every fifteen months.

Rates on advances are arrived at by each Bank according to the basic principles determined by the Board. The policy adopted in 1964 stated that rates "should ordinarily cover the cost of money to each Bank, based on its average cost of consolidated obligations, and a reasonable margin for its expenses, dividends, allocation to reserves and undivided profits". The policy was subsequently modified to require the Banks to adjust more quickly in response to market forces. Moreover, in recent years, the Banks have used changes in their rates to encourage or restrain member borrowing. For example, in 1967, rates charged on advances to members were set below the cost to the Banks of their own funds as a means of stimulating residential construction activity.

A further indication of the more discretionary approach by the Federal Home Loan Bank Board is the broader powers it has been given to regulate the liquidity requirements of member institutions.¹¹

The use of advances as a general stabilization tool has been widely questioned. The system was designed to regulate the supply of mortgage credit that would discourage building booms and support normal construction year in and year out. If, in addition, the Banks are to use advance policy as a tool for general stabilization policy, this can conflict with their goal to support normal construction year in and year out. While the Board appears to have been sympathetic with the Government's desire that it

¹¹ See Federal Home Loan Bank, *Annual Report*, 1968, p. 23.

react in a more contra-cyclical way, it has continued to stress its primary goal of maintaining System liquidity, so that the System serves as a buffer for the mortgage market and as such reduces the unusually severe impact on housing of general credit restraint.

The Emergency Home Finance Act of 1970 singled out the Home Loan Bank System as the principal vehicle for reviving the depressed housing industry in the United States. The System's advance policy described above was restructured, despite the previous criticisms for using advances as a general stabilizing tool. Member associations have been encouraged to look upon advances as a long-term source of funds. The Banks have offered long-term fixed rate advances tied to specific flotations of System's securities. Special advances with maturities as long as ten years and at subsidized rates have been made to assist associations in financing low and moderate-income housing. The Federal Home Loan Board has also encouraged members to negotiate firm commitments for advances from their Banks. The new policy for advances is designed to reduce the gap between housing credit needs and the savings flows to member associations.

Under the Emergency Home Finance Act of 1970, the Federal Home Loan Mortgage Corporation was created. The Corporation is authorized to purchase mortgages and participation interests in mortgages from financial institutions whose deposits are insured by an agency of the United States Government, or from members of the Federal Home Loan Bank System. The main purpose of the Corporation is to assist in the development of a secondary mortgage market to provide home buyers with an adequate and stable supply of funds on the best possible terms.

2. Sources of Home Loan Bank Funds

The main sources of funds available to the Banks are the issuing of capital stock to member institutions, the sale of consolidated obligations in the money and capital markets, the acceptance of deposits by member institutions, and the retention of earnings. Members have to purchase stocks so that their total holdings are no less than an amount equal to one percent of their mortgage holdings. The amount of stock held by a member limits its capacity to take advances. A member may increase its maximum borrowing privilege, which is twelve times its capital stock holding, by buying stock in excess of the legal minimum.

The Federal Home Loan Board issues consolidated obligations which are the joint and several obligations of the twelve Banks. Most of the obligations issued by the Board have had maturities of less than one year. From time to time, however, the Board has lengthened maturities to reduce the frequency of refunding, and more recently to achieve a goal of transforming a modest portion of obligations outstanding into long-term debt. To date, market conditions have made this difficult.

Consolidated obligations are secured by the assets of the Federal Home Loan Banks and indirectly by the assets of their borrowing member institutions. While not government issue, the Board's obligations have an implicit guarantee, in that the Treasury can purchase up to \$4 billion of them and is

authorized to deposit public funds with the Banks. The Board's obligations have received wide market acceptance and are held by non-financial corporations, trust funds, commercial banks, insurance companies, mutual savings banks, and private investors. Insofar as they are usually issued in denominations of \$5,000 and over, they are not a savings instrument for the small saver. Legislation passed in September 1966 authorized the Federal Open Market Committee of the Federal Reserve System to buy and sell Federal Home Loan Bank and other federal agencies' obligations in the open market.

The yields on the Board's obligations generally have been only slightly higher than those on Treasury issues with comparable terms. At least part of their wide acceptance may be explained by their exemption from most state and local taxation of principal and interest.

Following a program introduced in 1966 and subsequently extended, the Home Loan Bank Board coordinated its market financing with that of other government agencies through the U.S. Treasury Department. This has involved the Board in selling some of its obligations directly to government investment accounts.

By selling consolidated obligations in the national money and capital markets and by advancing funds received in this way to member institutions, the System provides a means by which home mortgage lending institutions have indirect access to national financial markets.

Through the medium of interbank transfers, the System also provides for the shifting of funds from areas having a surplus to areas experiencing a shortage. Interbank deposits are made on a short-term basis and usually to satisfy the interim requirements of the Banks between their financing dates.

The Home Loan Banks accept both demand and time deposits from member institutions. Although members are not required to keep cash balances with the Home Loan Banks, their deposits with these Banks have steadily grown. This probably reflects in part the higher rates they have been able to receive on such deposits, and in part the Board's ruling in 1966 phasing out the eligibility of commercial bank time deposits for purposes of meeting members' minimum requirements for holding cash and United States Government securities. Interest rates paid on deposits are to approximate the Banks' earnings on investments eligible for deposit funds.

3. Summary and Conclusions

The main function of the Federal Loan Bank Board and its regional Home Loan Banks is to provide secondary credit accommodation to member institutions, mostly savings and loan associations. These are thrift institutions, which employ approximately 85 percent of savings they accumulate by selling shares and by taking deposits for home financing. Without readily available secondary credit accommodation, these institutions would have to seek liquidity by holding more diversified portfolios, which implies that a smaller proportion of their total assets could be held in the form of residential mortgages. In Canada, the operations of mortgage loan companies and, to a smaller extent, the trust companies compare most closely with

those of the savings and loan associations in the United States.¹² The Canadian companies, unlike their American counterparts, do not hold as large a proportion of their portfolios in residential mortgages, and one can probably conclude that this reflects the absence of the availability of secondary credit accommodation in Canada.

The Home Loan Banks provide additional liquidity to member institutions by making available withdrawal advances to meet unusual or heavy withdrawal demands and to satisfy recurring needs for funds for seasonal mortgage lending. In addition to the Home Loan Banks' primary function of satisfying the need for secondary credit accommodation, they have a secondary function of providing member institutions with supplementary funds to expand their portfolios. The Banks make so-called expansion advances to member institutions from time to time, when the demand for residential mortgage financing outpaces their current inflows from public savings and mortgage repayments and, more recently, to increase the flow of funds into low and moderate-income housing.

The Home Loan Banks receive most of their funds for making advances from stock purchases, from voluntary deposits by member institutions, and from the sale of consolidated obligations in national money and capital markets. Insofar as the Banks' advances are financed with funds received from stock purchases and voluntary deposits by member institutions, the liquidity of individual institutions is satisfied through the pooling of their liquid assets. The success of a mutual pool arrangement depends on the degree of asymmetry in the needs for liquidity by individual members. In the United States, there are indications that there has been a sufficient degree of asymmetry intraregionally for mutual pooling to have been advantageous. When it has been insufficient, it has existed interregionally and the pooling of liquid assets has been accomplished through interbank transfers—the transfer on a short-term basis of funds from one Home Loan Bank to another. It is recommended that an arrangement be made whereby Canadian loan and trust companies can pool their liquid assets to strengthen the liquidity position of individual institutions.

It is recognized in the United States that the degree of asymmetry in the needs for liquidity by thrift and home financing institutions is insufficient for the mutual pooling of liquid assets to provide an adequate arrangement for a secondary reserve system. Additional liquidity is provided through the sale of consolidated obligations by the Home Loan Bank Board on behalf of its members and the use of funds received in this way for advances to member institutions. This is a means by which mortgage lending institutions have access to national money and capital markets for supplementary funds for short-term portfolio adjustment and to expand their portfolios. Before 1970, it was not the Federal Home Loan Bank Board's policy that the sale of consolidated obligations should be a continuous source of funds for portfolio expansion. Expansion advances financed from the sale of consolidated obligations were used primarily for expansion in home financing in

¹² Recently, a mortgage loan company operating in Ontario has changed its name to a savings and loan association.

developing or growing areas, with the intention that they would be repaid from anticipated growth of savings generated in the area. Since 1970, member associations have been encouraged to look upon advances as a permanent source of funds.

In the United States, the Federal Home Loan Bank Board has been able, through the years, to cultivate a wide market for the sale of its consolidated obligations. For a new institution in Canada, with similar functions, to sell its securities in the open market at rates only slightly higher than those on government securities with the same maturities will take time. The process can be speeded up, however, if provision is made for the Government to acquire the obligations of such a new institution and for government investment accounts and agencies, as well as the Bank of Canada, to trade in them. Similar provisions exist in the United States, although they have been employed infrequently.

The extent to which a facility to provide additional liquidity to home mortgage financing institutions should be used as a tool for short-run stabilization policy is open to debate. In recent years, the Federal Home Loan Bank Board has attempted to influence the pace of mortgage lending with discretionary changes in the amount of advances it was prepared to make, in the interest rate it charged on advances, and in the liquidity requirements that member institutions have had to maintain. This has been widely criticized by those who feel that the social costs for using residential construction as a tool for short-run stabilization are too high. Moreover, it has been argued that the gains from producing long-run stability in residential mortgage lending far outweigh the costs in allowing this sector to be more pro-cyclical or the possible short-run gains for overall stabilization policy by making the sector more contra-cyclical.

The Commission on Mortgage Interest Rates, established in 1968, made various recommendations in its report to protect savings and loan associations further from a sudden loss or slowdown in the growth of their deposits.¹³

Under the broader powers received in 1968, the Federal Home Loan Board has made changes in the proportion of their savings capital that savings and loan associations are required to hold in cash, deposits, government securities, or other eligible liquid paper. For example, in 1968 and 1969, the liquidity requirement was reduced to free funds for mortgage lending. The Commission recommended that instead of administered changes in liquidity requirements, changes should take place automatically whenever associations experienced net deposit withdrawals. For example, under normal conditions an association might be required to hold liquid assets equal to, say, 7 percent. When it experienced a net outflow of deposits, the association would be allowed to reduce its liquidity, dollar for dollar, to meet withdrawals until its liquidity ratio reached a specified minimum—say, 3 percent. Although a variable liquidity system would not provide a means

¹³ *Report of the Commission on Mortgage Interest Rates to the President of the United States and to the Congress*, Washington, Superintendent of Documents, U.S. Government Printing Office, August 1969. See also Irwin Friend, *Study of the Savings and Loan Industry*, U.S. Government Printing Office, 1970.

whereby an association could increase its mortgage portfolio as a result of deposit withdrawals, it would allow it to use all repayments of outstanding mortgages for reinvestment in new mortgages. During the "credit crunch" of 1966, all repayments had to be employed to meet deposit withdrawals.

The Commission also recommended that member associations be obliged to maintain part of their normal liquidity requirement as a deposit with their regional Home Loan Banks. In return, associations would be granted a firm line of credit usable only to meet net deposit withdrawals. To allow the Banks to satisfy the extra demand on them as a result of sudden draw-downs of lines of credit, the Commission recommended an increase in the Federal Home Loan Board's authorization to borrow from the Treasury.

Finally, the Commission hoped that when credit conditions turned favorable, the Board would exercise its authority to issue long-term bonds and lend the proceeds to member associations at a fixed rate of interest for a definite term. In other words, the Commission envisaged the Federal Home Loan Banks as operating more like central mortgage banks.

The Board of Governors of the Federal Reserve System reported in March 1972 on the special study its staff had undertaken on ways to moderate fluctuations in housing construction.¹⁴ The Board concluded that one of the major determinants of such fluctuations has been the variability in mortgage lending by non-bank thrift institutions resulting from changes in their deposit flows. Changes in these flows are explained by the institutions' inability to pay competitive interest rates on deposits. This inability has been, by and large, the result of legislative restrictions on the behavior of these institutions. The Board recommended that Congress eliminate all interest rate restrictions on FHA-insured and VA-guaranteed loans and that ceiling rates of interest on deposits, established by the supervisory authorities, be modified to allow for greater differentiation of accounts by maturity classes and to permit higher rates to be paid on longer-term deposits. Furthermore, if the specialized mortgage institutions were to put a modest proportion—say, up to 10 percent—of their earning assets into consumer loans, over the long run their average yield as earning assets would respond more closely to changes in market interest rates. This would enable them to change their deposit rates to reflect changes in market rates and thereby reduce the shift in consumer savings to market instruments. More flexibility in deposit interest rates also would be allowed if the depository lending institutions were to offer mortgages with variable interest rates.

¹⁴ See "Ways to Moderate Fluctuations in the Construction of Housing", *Federal Reserve Bulletin*, March 1972, pp. 215-25.

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Appendix E

Some Observations of Foreign Experience in Assisting Housing during Periods of Monetary Restraint

by H. H. Binhammer

Downturns in private housing starts associated with rounds of financial restraint have been recorded since the early 1950s or early 1960s in the United States and Western European countries for which data are available. Declines in housing starts or permits, for a representative group of European countries and for the United States and Canada, are shown in *Table E-1*.

In most countries, a shortage of long-term financing is considered to be the most important factor affecting the cyclical declines in housing output. Although high and rising costs of mortgage credit account for some of the declines in output, it is generally held that the availability of funds rather than their costs is the primary explanatory factor of cyclical swings in housing output, particularly during periods of intense inflationary expectations. To date, however, there is still insufficient empirical evidence to distinguish accurately between the relative effect of a reduction in the availability of mortgage credit and an increase in the cost of such credit as the dominant source of fluctuations in private residential mortgage markets.

Financial restraint may be transmitted in various ways to residential mortgage markets and through them to the housing sector. In some countries, particularly the United States, during periods of credit stringency and high interest rates, there have been marked declines in the inflow of savings to private financial institutions that invest in residential mortgages. This may have been the result of greater saver preference for direct rather than intermediated investment at these times, and of increased recourse by consumers to finance personal consumption outlays out of their own accumulated savings. On the other hand, during periods of rising interest rates, lenders

Table E-1

DECLINES IN SEASONALLY ADJUSTED PRIVATE HOUSING STARTS OR PERMITS DURING PERIODS OF FINANCIAL RESTRAINT, 1955-1970

Country	Period of decline	Number of quarters of decline	Total decline (percent)	Average quarterly rate of decline (percent)
Belgium ¹ — permits	1957 QII to 1958 QII	4	18	4
	1964 QI to 1965 QII	5	23	5
	1969 QII to 1970 QI	3	30	10
Canada — starts	1955 QIII to 1957 QI	6	45	8
	1958 QIV to 1960 QII	6	44	7
	1965 QII to 1967 QI	6	28	5
	1969 QI to 1970 QII	5	54	11
Germany ^{1,2} — permits	1960 QI to 1960 QIII	2	3	1
	1965 QIII to 1967 QI	6	16	3
Great Britain — starts	1957 QI to 1957 QIII	2	10	5
	1961 QIV to 1963 QI	5	32	6
	1965 QI to 1966 QIV	7	16	2
	1968 QII to 1970 QI	7	28	4
Italy ^{1,2} — permits	1963 QIII to 1965 QI	6	54	9
Switzerland ¹ — permits	1955 QII to 1957 QIV	10	53	5
	1960 QII to 1965 QI	19	50	3
	1969 QIV to 1970 QIII	3	30	10
United States — starts	1955 QII to 1957 QI	7	32	5
	1959 QI to 1960 QIV	7	26	4
	1965 QIV to 1966 QIV	4	39	10
	1969 QI to 1970 QI	4	24	6

¹ Includes minor number of public starts.

² The latest period of financial restraint is not relevant because of special factors affecting housing activity.

Source: Board of Governors of the Federal Reserve System, Washington, D.C.

have turned to investments with shorter maturities and greater liquidity and, when possible, to investments with higher yields than were available from residential mortgages.

In the United Kingdom, the major source of housing finance for buyers of new and used houses has been the building societies. The interest rates paid by these societies, set by the Building Societies Association and voluntarily followed by its members, have tended to lag behind changes in other short-term rates. This has caused sizable fluctuations in the net flow of funds to the societies and in the availability of credit for housing. The inflow of funds to the societies has decreased when rates on alternative investments have been rising and has increased when other rates have been falling. Housing construction has reflected these changes in interest rate differentials.¹

Professors L. B. Smith and G. Sparks in their study on Canadian mortgage flows between 1954 and 1965 found that "monetary policy has a substantial influence upon the volume of Canadian financial institution

¹ See M. J. Vipond, "Fluctuation in Private Housebuilding in Great Britain, 1950-1966", *Scottish Journal of Political Economy*, Vol. XVI, June 1969.

mortgage approvals. The institutions most strongly influenced are the life insurance companies and chartered banks, because both their investment portfolio decisions and their availability of investible funds are strongly influenced by relative yields. Trust companies, whose inflows and portfolio investments are only slightly responsive to relative yields, are influenced to a lesser but still important degree by monetary policy.”²

To prevent extreme declines in the flow of residential mortgage funds during periods of financial restraint, governments have used three main types of policy alternatives. These are

1. Measures to maintain the inflow of funds to intermediaries that engage in residential mortgage lending
2. Incentives or controls that affect portfolio management by intermediaries
3. Direct mortgage lending by government departments, agencies, and sponsored institutions

This appendix focuses on the first two types of policy alternatives.

I. MEASURES TO MAINTAIN SAVINGS INFLOWS

There are two major ways for channeling funds into residential mortgage loans: through the taking of deposits by financial intermediaries, common in Great Britain, the United States, and Canada; and through the sale of mortgage-backed securities, as in Denmark, Germany, Italy, Sweden, and only recently in the United States. Experience with either type of source for housing finance shows that one is not better than the other for providing continuity in the flow of funds to housing during periods of financial restraint.

In Europe, both private and government institutions have offered a variety of incentive schemes to encourage savings for house-building purposes. Insofar as incentives commit savers to long-term contractual saving, funds available for residential mortgage lending are less susceptible to changing monetary conditions. In Germany, for example, a depositor in a *Bausparkassen* (building and loan association) is granted the option of taking a saving bonus from the Government or of counting his new savings deposit as an outlay which is deductible for income-tax purposes.³

At other intermediaries in Germany, long-term savers also receive a government premium up to a specified limit. In 1965, France broadened its

² L. B. Smith and Gordon R. Sparks, “The Interest Sensitivity of Canadian Mortgage Flows”, *Canadian Journal of Economics*, August 1970, p. 421.

³ Individuals can receive low-cost housing loans by depositing funds with a *Bausparkassen* for which they receive a rate of interest below that offered by alternative deposit-taking institutions. When funds deposited by an individual are equal to a certain proportion of his desired loan, he becomes eligible for a relatively low-interest housing loan. Deposit and loan rates at the *Bausparkassen* are changed infrequently and set independently of short-run credit conditions. See “Building and Loan Association Business in Recent Years”, Bundesbank, *Monthly Report*, Vol. 22, No. 4, April 1970.

In addition to the *Bausparkassen*, residential mortgage loans are made by savings banks (*Sparkassen*) and insurance companies from contractual savings which enjoy fiscal incentives. Only the mortgage banks (*Hypothekenbanken*) do not finance their mortgage operations from contractual savings; they sell mortgage bonds (*pfandbriefe*). The lending activity of the mortgage banks has been sensitive to changing credit conditions reflected in the capital markets.

program which offers a government savings bonus specifically to encourage contractual savings for housing.⁴ Commercial banks and credit mortgage associations in Denmark have introduced a savings scheme which includes tax benefits and government interest subsidies aimed at attracting long-term contractual savings for housing. Although somewhat more limited in scope, Great Britain, Italy, and the Netherlands also have schemes which attempt to encourage long-term savings commitments for housing purposes.⁵ Many of these incentive schemes appear to be oriented more toward accumulating a downpayment than toward providing long-term mortgage financing. But insofar as the schemes have helped to attract and retain savings capital for housing that otherwise might have found employment elsewhere in the economy during periods of financial restraint, they have helped, at least marginally, to stabilize the flow of residential mortgage credit.

In the United States, a somewhat different approach is taken to support residential mortgage lending by institutions which depend upon savings deposits as a primary source of funds. The savings and loan associations, which fall into this category, are the single most important lender for single-family housing. When these associations have experienced large withdrawals of deposits, they have received advances from the Federal Home Loan Banks. During recent periods of financial restraint, the terms under which these advances are available have been made easier to encourage the associations to continue their mortgage lending activity. There have been instances, however, when the Banks were limited in the amount of support

⁴ In France, most new residential construction has been provided by the public sector. The Habitations à Loyer Modéré (HLM) is responsible for the construction of low-cost housing. This is financed by the central depository for savings banks, Caisse des Dépôts et Consignations, through which short-term savings held with the savings banks are channeled into longer-term loans. The first 1,000 francs of interest earned on savings bank deposits are tax free. The differential between rates charged on HLM and rates paid on savings deposits represents a further state subsidy.

The *épargne-logement* is a housing saving scheme in France similar to the operations of the *Bausparkassen* in Germany. Savers can open an account with a savings or commercial bank on which a relatively low rate of interest is paid. After a specified waiting period and accumulated amount of earned interest, however, a loan is available to purchase a house. In addition to the loan, the saver receives a premium of up to 6,000 francs, depending upon the amount saved and the interest accumulated.

About one-third of residential construction in France is provided by Crédit Foncier, a semi-public institution, and its subsidiary, Comptoir des Entrepreneurs. Crédit Foncier obtains its funds from public bond issues and the private placement of bonds with insurance companies, commercial banks, and other financial institutions. Direct mortgage loans are made, as well as intermediate construction loans. These loans are rediscountable with the Bank of France and have not been included in the restrictive discount ceilings for commercial banks. Crédit Foncier also endorses special construction loans made by the commercial banks which makes such loans discountable with the central bank. The state finances any difference between lending rates and the borrowing rate on bonds.

After 1967, Crédit Foncier attempted to develop the private mortgage market (*marché hypothécaire*). During periods of credit restraint, however, Crédit Foncier increasingly had to assist the market as a discounter and lender of last resort. More recently, to stimulate mortgage financing by private financial intermediaries, it has refinanced mortgage loans at penalty rates; this has led to very high mortgage interest rates.

⁵ Australia, not included in this survey, has a grant system under which couples who save a specified amount on their own account receive an outright state "gift" to enable them to buy a house.

they were able to give member institutions by their own ability to raise funds through the sale of Federal Home Loan Bank Board debentures in the national money and capital markets.⁶

In countries where the sale of bonds provides an important source of funds for residential mortgage lending, various programs have been introduced to assure a market for such bonds during periods of high and rising interest rates.

In Italy, Special Institutes for Land and Building Credit supply the major part of residential mortgage loans with funds they raise by selling long-term bonds.⁷ These Institutes have repurchased their mortgage bonds at time to keep their prices from falling as far as prices on other bonds. The Central Bank occasionally has also provided support to the mortgage bond market. In Denmark, mutual credit institutions issue loans for housing in the form of negotiable bonds of fixed value and interest. Borrowers sell these bonds in the market to obtain the necessary funds. During periods of financial restraint, the Danish National Bank has supported the price of these bonds through open market purchases. In Sweden, the National Pension Fund has purchased bonds issued by mortgage bankers, housing credit societies, and mortgage companies.

II. POLICIES AFFECTING PORTFOLIO MANAGEMENT

Various methods have been employed to encourage financial institutions to increase or maintain the proportion of their assets in the form of housing finance. Four methods discussed below are (1) fiscal incentives to encourage long-term contractual savings, (2) changes in reserve requirements and discount privileges, (3) selective credit controls, and (4) support of mortgage bond markets.

Fiscal incentives that induce longer-term savings make liquidity considerations of the financial intermediaries less important. The institutions then are less reluctant to make long-term residential mortgage loans. Moreover, contractual savings arrangements discourage substantial outflows from intermediaries during periods of rising interest rates and allow the intermediaries to continue issuing mortgage loans.

In 1965, to stimulate housing, savings banks in Italy were allowed to include mortgage bonds as part of their reserve requirements. In 1970, when Italy passed through a period of extreme financial restraint, to protect housing output the commercial and savings banks were required to invest a specified percentage of increments in their savings deposits in mortgage bonds. The marginal reserve requirement was an attempt to support the

⁶ The Federal Reserve Board's Regulation Q Ceilings on interest rates on time deposits have been used in recent years to protect the flow of loanable funds to the captive mortgage lending institutions.

⁷ The *Istituti Speciali di Credito Fondiario e Edilizio* are the most important source of mortgage credit in Italy. Of the seventeen institutes, nine are autonomous "special sections" attached to the banks (five commercial banks and four savings banks). All finance themselves almost entirely by issuing mortgage bonds (*cartelle fondiarie*). Because of the "tacit repurchase clause", investors have accepted lower yields on the institutes' mortgage bonds than on other bonds.

mortgage bond market. In Sweden, mortgage bonds are held by the commercial banks as part of their liquid secondary reserves.

Since 1965, the Bank of France has granted commercial banks more liberal discount facilities and preferential discount rates for construction loans (*prêts spéciaux à la construction*) than for other financial paper. Although this measure was introduced to give preference to housing, over the long run it could be readily adapted for use as a contra-cyclical housing policy.

In Sweden, France, and Switzerland, where credit ceilings have been used, house building has been exempt from credit expansion limitations or has received more liberal ceilings than other categories of lending. In all three countries, house building has received preferential treatment to reduce the impact of financial restraint on it. Also, in Sweden, when the central bank has imposed capital rationing programs, priority has been given to mortgage bonds to offset the impact of tight money.

The Bank of Canada has employed moral suasion on the commercial banks to urge them to provide funds to the mortgage market during periods of monetary restraint.

It was noted earlier that in many of the European countries the sale of mortgage bonds is an important source of funds for housing. During periods of financial restraint, particularly in Denmark, central banks have provided continuity to the flow of mortgage funds by purchasing these bonds in the open market. In Italy, to support the mortgage market and thereby housing activity, the rate of interest on new mortgage bonds was increased from 5 percent to 6 percent in early 1970. At the same time, a subsidy was paid by the central bank out of its operating profits on all new outstanding mortgage bonds in order to make yields on these bonds more competitive.

In Europe, financial intermediaries convert mortgage assets into bonds which are widely traded in security markets.

To reduce the impact of financial restraint on the housing sector, these bonds have been purchased by central banks and other institutions.

In the United States, the Federal National Mortgage Association (FNMA) and more recently the Federal Home Loan Bank System have attempted to establish a secondary mortgage market. The objectives of such a market are to fulfill long-run housing needs, to stabilize fluctuations in housing credit, to channel funds into capital shortage areas, and to provide greater liquidity to the mortgage instrument. Before the reconstitution of the FNMA in 1969 as a private corporation, free of federal budget restraint, it was only marginally successful in supporting the mortgage market during periods of financial restraint.

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Appendix F
Extract from Bill C-135

21-22 ELIZABETH II

CHAPTER 49

An Act to provide additional financing mechanisms and institutions for the residential mortgage market in Canada

[Assented to 21st December, 1973]

Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

SHORT TITLE

Short title

1. This Act may be cited as the *Residential Mortgage Financing Act*.

INTERPRETATION

Definitions

2. (1) In this Act,

"Corporation"

"Corporation" means the Federal Mortgage Exchange Corporation incorporated by section 4;

"residential property"

"residential property" means a house or the property included within a housing project.

Expressions in *National Housing Act*

(2) In this Act, the expressions "mortgage", "house" and "housing project" have the same meanings as in the *National Housing Act*.

PURPOSE OF ACT

Purpose

3. The purpose of this Act is to enhance the marketability of mortgages issued on residential properties in Canada and improve the effectiveness of the contribution of the private sector to the financing of housing in Canada.

FEDERAL MORTGAGE EXCHANGE CORPORATION

Incorporation

Incorporation

4. (1) Such persons, not exceeding ten in number, as may be designated by the Governor in Council together with such persons as are shareholders of the Corporation from time to time are hereby incorporated as a company with share capital to be known as the Federal Mortgage Exchange Corporation.

Subject to *Loan Companies Act*

(2) Except as otherwise provided in this Act, the Corporation has all the powers, privileges and immunities conferred by, and is subject to all the limitations, liabilities and provisions of, the *Loan Companies Act*.

First directors

5. (1) The persons designated by the Governor in Council under section 4 are the provisional directors of the Corporation.

Filling vacancies

(2) If a provisional director dies, resigns or becomes incapable of carrying out his duties, the Governor in Council may designate a person to replace him.

Objects

Objects

6. The objects of the Corporation are
(a) to buy and sell mortgages that are secured on residential properties and eligible for investment under the *Loan Companies Act*;
(b) to undertake to buy or sell mortgages described in paragraph (a); and
(c) to lend for periods not in excess of one year on the security of mortgages described in paragraph (a).

Capitalization

Authorized capital

7. (1) The capital stock of the Corporation shall be one hundred million dollars divided into shares having a par value of ten dollars each.

Amount of subscription

(2) The amount to be subscribed before the provisional directors may call a general meeting of the shareholders shall be one million dollars.

Commencement of business

(3) The Corporation shall not commence business until one million dollars have been subscribed upon its capital stock and one hundred thousand dollars or more paid thereon.

Head Office

Head office

8. The head office of the Corporation shall initially be at such place within Canada as may be designated by the Governor in Council and thereafter at such place in Canada as the shareholders of the Corporation may determine by by-law.

Powers of Corporation

Ancillary powers

9. (1) The Corporation may, as ancillary to its objects, exercise any or all of the following powers, namely:

(a) the power to issue and allot fully paid-up shares of the Corporation in payment or part payment for any property purchased or otherwise acquired by the Corporation;

(b) the power to make deposits with and to buy and sell the short term debt obligations of

(i) banks and other corporations any of whose deposits are insured by the Canada Deposit Insurance Corporation or the Quebec Deposit Insurance Board, and

(ii) credit unions, within the meaning of subsection 137(6) of the *Income Tax Act*;

(c) the power to invest its funds not otherwise being applied in the furtherance of its objects in investments authorized under subsection 60(1) of the *Loan Companies Act*; and

(d) the power to do all such other things as are incidental or conducive to the attainment of the objects and the exercise of the powers of the Corporation.

Limitation on borrowing powers

(2) The aggregate of the sums of money borrowed by the Corporation and outstanding shall not at any time exceed three hundred million dollars or such greater amount as the Governor in Council may from time to time authorize.

Government Companies Operation Act

10. (1) The *Government Companies Operation Act* applies to the Corporation notwithstanding section 6 of that Act, and ceases to apply to the Corporation on the day that the Corporation is deleted from Schedule D to the *Financial Administration Act*.

Proprietary corporation

(2) The Corporation shall be included in Schedule D to the *Financial Administration Act*; and when less than fifty per cent of the issued and outstanding shares of the Corporation are held for the Government of Canada, the Corporation shall be deleted from Schedule D to that Act by order of the Governor in Council.

Provincial taxes and fees

(3) The Corporation shall be deemed, for the purposes of the *Crown Corporations (Provincial Taxes and Fees) Act*, to be listed in the schedule to that Act during the period that the *Government Companies Operation Act* applies to the Corporation.

Surplus Crown Assets Act

(4) The *Surplus Crown Assets Act* does not apply to the Corporation.

Application of the Loan Companies Act

11. (1) The following provisions of the *Loan Companies Act* do not apply in respect of the Corporation, namely: sections 14, 36, 37, 60, 60.1 and 60.2, paragraph 60.3(1)(c) and sections 61.1, 62, 65 and 68.

Idem

(2) During any period in which the Corporation is an agent of Her Majesty, pursuant to subsection 10(1), the following provisions of the *Loan Companies Act* do not apply in respect of the Corporation, namely: sections 13, 18 and 32, paragraphs 58(11)(b) and 58(12)(b), subsection 58(13) and sections 60.4, 69, 70, 71.1, 71.2 and 72 to 75.

s. 13 of Loan Companies Act

(3) When the Corporation ceases to be an agent of Her Majesty, section 13 of the *Loan Companies Act* applies in respect of the Corporation as if the Corporation had been incorporated on the day that it ceased to be an agent of Her Majesty.

Federal Government Participation

Initial issue of shares

12. (1) The first offering of shares of the Corporation shall be made to the Government of Canada and the Minister of Finance shall subscribe for, purchase and hold those shares for the Government of Canada.

Subsequent issues

(2) With the approval of the Governor in Council, the Minister of Finance may, from time to time, subscribe for, purchase and hold subsequent issues of shares of the capital stock of the Corporation for the Government of Canada.

How registered and voted

(3) Shares of the Corporation purchased for the Government of Canada shall be registered in the books of the Corporation in the name of Her Majesty in right of Canada as represented by the Minister of Finance and may be voted by the Minister of Finance or his authorized proxy on behalf of Her Majesty.

Disposition
of shares
and
securities

(4) With the approval of the Governor in Council but subject to section 15, the Minister of Finance may, from time to time, dispose of any shares or securities of the Corporation held by Her Majesty in right of Canada and all proceeds received from any such disposition form part of the Consolidated Revenue Fund.

Trust
assets

of a corporation to which the *Canadian and British Insurance Companies Act*, the *Loan Companies Act* or the *Trust Companies Act* applies.

(2) The debentures and other evidences of indebtedness of the Corporation in which a foreign insurance company or British insurance company has invested its funds are eligible to be vested in trust in Canada by the foreign insurance company under the *Foreign Insurance Companies Act* or by the British insurance company under the *Canadian and British Insurance Companies Act*.

(3) For the purposes of subsection (1), the funds of a trust company are deemed to include the guaranteed trust money held by the trust company but an investment in the debentures or other evidences of indebtedness of the Corporation is subject to any restrictions contained in the instrument creating the trust.

17. The *Loan Companies Act* is amended by adding thereto the following Part:

"PART II

Special Provisions Applicable to Mortgage Investment Companies

101. (1) Where a loan company that is making an application under section 69 for a licence or a loan company that holds a licence under section 69 to transact the business of a loan company requests that it be designated under that licence as a mortgage investment company, the Minister may designate the company as a mortgage investment company if the Minister is of the opinion that the company can comply with the requirements of this Part.

(2) When a company is designated under subsection (1), it shall be known as a mortgage investment company and the provisions of this Part apply to that company.

102. (1) Notwithstanding section 68, the aggregate of the sums of money borrowed by a mortgage investment company and outstanding shall not at any time exceed five times the excess of the book value of the assets of the company over its liabilities; but if at any particular time the book value of the assets of the company in the form of

Limit

(5) The total amount that the Government of Canada may have invested or be committed to invest in the shares of the Corporation shall not exceed fifty million dollars.

Guaranteed
trust
money

Government
loans

13. (1) Subject to subsection (2), the Minister of Finance may, upon such terms and conditions as the Governor in Council may approve, make loans to the Corporation and may acquire and hold securities of the Corporation as evidence thereof.

Limit

(2) The total of all outstanding loans made under this section to the Corporation shall not at any time exceed the sum of two hundred and twenty-five million dollars.

R.S.
c. L-12

When loans
from
other
sources
required

(3) Notwithstanding the limit prescribed under subsection (2), the aggregate of all outstanding loans made under this section shall not at any time exceed one hundred and fifty million dollars unless any excess over that amount is not greater than the aggregate of all outstanding loans obtained from sources other than the revenues of the Government of Canada or any agencies thereof.

Mortgage
investment
company

Payment
out of
C.R.F.

14. Subject to subsections 12(5) and 13(2), the Minister of Finance may authorize advances out of the Consolidated Revenue Fund for the purpose of acquiring shares of the Corporation or making loans to the Corporation.

Application
of Part

Government
holdings

15. Until Parliament otherwise provides, the Corporation and the Minister of Finance shall ensure that more than fifty per cent of the issued and outstanding shares of the Corporation are held at all times for the Government of Canada.

Borrowing
powers
limited

General

Insurance,
trust and
loan funds

16. (1) The debentures and other evidences of indebtedness of the Corporation are an authorized investment for the funds

(a) investments in mortgages or hypothecs on residential property as defined in the *Residential Mortgage Financing Act* or loans on the security of such property, and

(b) cash on hand or on deposit in a bank or other depository approved by the Superintendent,

is less than two-thirds of the book value of the assets of the company, the aggregate of the sums of money borrowed by the company and outstanding shall not at that time exceed three times the excess of the book value of the assets of the company over its liabilities.

(2) For the purpose of subsection (1), the principal amount of any charges or liens on the real estate or leaseholds of the mortgage investment company remaining unpaid shall be included in the computation of the sums of money borrowed by the company.

103. (1) A mortgage investment company may invest its funds in real estate or leaseholds in Canada for the production of income, either alone or jointly with any corporation incorporated in Canada or any person administering a trust governed by a registered pension plan or deferred profit sharing plan as those plans are defined in the *Income Tax Act*, if

(a) a lease of the real estate or leasehold is made to, or guaranteed by,

(i) the government, or an agency of the government, of the province in which the real estate or leasehold is situated, a municipality in that province or an agency of such municipality, or

(ii) a corporation, the preferred shares or common shares of which are, at the date of investment, authorized as investments by paragraph 60(1)(d) or (e), or by those paragraphs as modified by section 60.1; and

(b) the lease provides for a net revenue sufficient to yield a reasonable interest return during the period of the lease and to repay at least eighty-five per cent of the amount invested by the company in the real estate or leasehold within

the period of the lease, but not exceeding thirty years from the date of investment; and the company may hold, maintain, improve, lease, sell or otherwise deal with or dispose of the real estate or leasehold.

(2) A mortgage investment company may invest its funds in real estate or leaseholds in Canada for the production of income, either alone or jointly with any corporation incorporated in Canada or any person administering a trust governed by a registered pension plan or deferred profit sharing plan as those plans are defined in the *Income Tax Act*, if the real estate or leasehold has produced, in each of the three years immediately preceding the date of investment, net revenue in an amount that, if continued in future years, would be sufficient to yield a reasonable interest return on the amount invested in the real estate or leasehold and to repay at least eighty-five per cent of that amount within the remaining economic lifetime of the improvements to the real estate or leasehold but not exceeding forty years from the date of investment; and the company may hold, maintain, improve, repair, lease, sell or otherwise deal with or dispose of the real estate or leasehold.

(3) Paragraphs 60(1)(h) and (i) do not apply in respect of a company to which this section applies.

104. (1) A mortgage investment company may, subject to this section, make investments and loans not authorized by subsections 60(1) to (4) or this Part, including investments in real estate or leaseholds.

(2) Investments in real estate or leaseholds in Canada pursuant to subsection (1) shall be made only for the production of income, and may be made either alone or jointly with any corporation incorporated in Canada or any person administering a trust governed by a registered pension plan or deferred profit sharing plan as those plans are defined in the *Income Tax Act*; and the company may hold, maintain, improve, repair, lease, sell or otherwise deal with or dispose of such real estate or leaseholds.

Idem

Computing
sums
borrowed

Investment
in real
estate or
leaseholds

Application
of para-
graphs
60(1)(h)
and (i)

Other
investments

Production
of income

Saving

(3) This section shall be deemed not to
(a) enlarge the authority conferred by subsections 60(1) and (2) to invest in mortgages or hypothecs and to lend on the security of real estate or leaseholds;
(b) affect the operation of paragraph 60(1)(e) with reference to the maximum proportion of common shares and total shares of any corporation that may be purchased; or
(c) affect the operation of subsection 60(3).

Limit

(4) Subsection 60(5) does not apply in respect of a company to which subsection (1) applies but the total value of the investments made under subsection (1) and held by the company, excluding those that are or at any time since acquisition have been authorized as investments apart from that subsection, shall not exceed seven per cent of the book value of the total assets of the company.

Application of s. 65

(5) Section 65 does not apply in respect of a mortgage investment company.

Interlocking directors

105. (1) Where a mortgage investment company has a contract with any corporation or firm to obtain investment advice or management services therefrom, the number of directors of the mortgage investment company who are also directors or officers of the corporation or members or officers of the firm shall not exceed four or one-quarter of the number of directors of the mortgage investment company, whichever is the lesser.

Investment and management corporations

(2) Where a mortgage investment company has a contract with any corporation or firm to obtain investment advice or management services therefrom,

- (a) a director of the corporation,
- (b) a person or group of persons that is a substantial shareholder of the corporation, and
- (c) a person who is an officer of the corporation or an officer or member of the firm

shall be deemed, for the purposes of section 60.3, to be a director, substantial shareholder or officer, as the case may be, of the mortgage investment company.

Prohibited transactions

(3) A mortgage investment company shall not purchase or otherwise acquire

assets from or sell or otherwise dispose of assets to any person or corporation if under section 60.3 it may not make a loan to such person or invest in such corporation; but this provision does not apply in respect of

(a) mortgages or hypothecs securing a loan insured under the *National Housing Act*;

(b) mortgages or hypothecs securing a loan insured by a policy of mortgage insurance issued by an insurance company registered under the *Canadian and British Insurance Companies Act* or the *Foreign Insurance Companies Act*; or

(c) mortgages or hypothecs acquired not later than six months after the company became designated as a mortgage investment company under section 101.

Liquidity level

106. (1) Notwithstanding any provision of Part I, a mortgage investment company shall so manage its affairs that the aggregate of

(a) all repayments of principal on mortgages or hypothecs held by it and reasonably expected to be received within the year,

(b) amounts maturing on its other investments within the year,

(c) such amount of credit from chartered banks in Canada as is acquired in accordance with conditions imposed by the Superintendent, and

(d) cash on hand or on deposit in a bank or other depository approved by the Superintendent

shall at all times be equal to or in excess of the aggregate of the sum of all mortgage commitments made by it and falling due within the year and the amount of all debt instruments issued by it and maturing within the year.

Meaning of "within the year"

(2) In this section, the expression "within the year" means the twelve-month period following the month in which the calculation is made.

Business confined

107. A mortgage investment company shall not carry on its undertaking in any country other than Canada.

Shares
are
eligible
investment

108. (1) Notwithstanding any provision of the *Canadian and British Insurance Companies Act*, the *Trust Companies Act* or Part I of this Act, the shares of the capital stock of a mortgage investment company are an eligible investment for the funds of insurance companies, trust companies and other loan companies governed respectively by those Acts, but

(a) the proportion of the funds of those companies that may be invested at any one time in the common shares of corporations, and

(b) the proportion of the shares of any corporation that may be purchased by those companies,

under the requirements of the Acts governing those companies, are not increased by this provision.

Guaranteed
trust
money

(2) For the purposes of subsection (1), the funds of a trust company are deemed to include the guaranteed trust money held by the trust company but an investment of guaranteed trust money in the shares of a mortgage investment company is subject to any restrictions contained in the instrument creating the trust.

Debentures
are eligible
investments

109. (1) Notwithstanding any provision of the *Canadian and British Insurance Companies Act*, the *Trust Companies Act* or Part I of this Act, the debentures or other evidences of indebtedness of a mortgage investment company are an eligible investment for the funds of insurance companies, trust companies and other loan companies governed respectively by those Acts; but the limit on the amount of the investments of those companies in the bonds, debentures, stocks or other securities of a corporation under the requirements of the Acts governing those companies is not increased by this provision.

Guaranteed
trust
money

(2) For the purposes of subsection (1), the funds of a trust company are deemed to include the guaranteed trust money held by the trust company but an investment of guaranteed trust money in the debentures or other evidences of indebtedness of a mortgage investment company is subject to any restrictions contained in the instrument creating the trust.

Funds of
British
insurance
company

110. (1) Notwithstanding any provision of the *Canadian and British Insurance Companies Act*,

(a) shares of the capital stock of a mortgage investment company, and

(b) debentures or other evidences of indebtedness of a mortgage investment company

in which a British company has invested its funds are eligible to be vested in trust in Canada for the purposes of that Act; but the limit on the total accepted value of common shares that may be vested in trust by the company is not increased by this provision.

Funds of
foreign
insurance
company

(2) Notwithstanding any provision of the *Foreign Insurance Companies Act*,

(a) shares of the capital stock of a mortgage investment company, and

(b) debentures or other evidences of indebtedness of a mortgage investment company

in which a foreign insurance company has invested its funds are eligible to be vested in trust in Canada for the purposes of that Act; but the limit on the total accepted value of common shares that may be vested in trust by the company is not increased by this provision.

Limits on
investment

111. (1) Subject to subsection (2), a mortgage investment company shall have and maintain at least fifty per cent of the book value of its assets in one or more of the following forms:

(a) investments in mortgages or hypothecs on residential property as defined in the *Residential Mortgage Financing Act* or loans on the security of such property; and

(b) cash on hand or on deposit in a bank or other depository approved by the Superintendent.

Idem

(2) The total of

(a) the book value of the investments of a mortgage investment company in shares of the capital stock of companies at least eighty-five per cent of whose assets are in the form of residential property as defined in the *Residential Mortgage Financing Act*, and

(b) the book value of the investments of a mortgage investment company in real

estate or leaseholds before deducting the amount of any charges or liens thereon but excluding real estate or leaseholds acquired by the company by foreclosure or otherwise after default made on a mortgage, hypothec or agreement of sale in respect thereof,

shall not exceed twenty-five per cent of the book value of its total assets.

Removal
of designa-
tion

112. (1) Where a mortgage investment company fails to comply with any of the requirements of this Part, the Minister may withdraw its designation as a mortgage investment company or refuse to designate it as a mortgage investment company on a renewal of its licence under section 69.

Idem

(2) A company that has been designated in its licence as a mortgage investment company may, with the prior approval of its shareholders obtained at a regular or special meeting of shareholders, apply to the Minister to have the designation withdrawn; and the Minister shall thereupon remove the designation from its licence immediately or with effect at a stated future day.

Effect

(3) This Part ceases to apply to a loan company with effect from the day the company ceases to be designated as a mortgage investment company."

INCOME TAX STATUS OF MORTGAGE INVESTMENT COMPANIES

R.S., 1952,
c. 148;
1970-71-72,
c. 63

18. (1) The *Income Tax Act* is amended by adding thereto, immediately after section 130 thereof, the following heading and section:

"Mortgage Investment Corporations

Deduction
from tax

130.1 (1) In computing the income for a taxation year of a corporation that was, throughout the year, a mortgage investment corporation,

(a) there may be deducted the aggregate of

(i) all taxable dividends, other than capital gains dividends, paid by the corporation during the year or within 90 days after the end of the year (not exceeding the amount by which the

taxable income of the corporation for the year, determined without regard to the provisions of this paragraph, exceeds the taxed capital gains of the corporation for the year) to the extent that such dividends were not deductible by the corporation in computing its income for the preceeding year, and

(ii) 1/2 of all capital gains dividends paid by the corporation during the period commencing 91 days after the commencement of the year and ending 90 days after the end of the year; and

(b) no deduction may be made under section 112 in respect of taxable dividends received by it from other corporations.

Dividend
equated
to bond
interest

(2) For the purposes of this Act, any amount received from a mortgage investment corporation by a shareholder of the corporation as or on account of a taxable dividend, other than a capital gains dividend, shall be deemed to have been received by the shareholder as interest payable on a bond issued by the corporation after 1971.

Application
of sub-
section (2)

(3) Subsection (2) applies where the taxable dividend (other than a capital gains dividend) therein described was paid during a taxation year throughout which the paying corporation was a mortgage investment corporation or within 90 days thereafter.

Electing
capital
gains
dividend

(4) Where at any particular time during the period commencing 91 days after the commencement of a taxation year of a corporation that was, throughout the year, a mortgage investment corporation and ending 90 days after the end of the year, a dividend is paid by the corporation to shareholders of the corporation, if the corporation so elects in respect of the full amount of the dividend, in prescribed manner and prescribed form and at or before the particular time or the first day on which any part of the dividend was paid if that day is earlier than the particular time,

(a) the dividend shall be deemed to be a capital gains dividend to the extent that it does not exceed

(i) 2 times the taxed capital gains of the corporation for the year

minus

(ii) such part, if any, of each dividend paid by the corporation during the

period and before the particular time as is deemed by this subsection to be a capital gains dividend; and

(b) notwithstanding anything in this Act, any amount received by a taxpayer in a taxation year as or on account of the dividend shall not be included in computing his income for the year as income from a share of the capital stock of the corporation, but shall be deemed to be a capital gain of the taxpayer for the year from the disposition of capital property.

Public
corporation

(5) Notwithstanding any other provision of this Act, a mortgage investment corporation shall be deemed to be a public corporation.

Meaning
of
"mortgage
investment
corporation"

(6) For the purposes of this section, a corporation is a mortgage investment corporation throughout a taxation year if, throughout the year,

(a) it was a Canadian corporation;

(b) its only undertaking was the investing of funds of the corporation and it did not manage or develop any real property;

(c) none of the property of the corporation consisted of

(i) debts owing to the corporation that were secured on real property situated outside Canada,

(ii) debts owing to the corporation by non-resident persons, except any such debts that were secured on real property situated in Canada,

(iii) shares of the capital stock of corporations not resident in Canada;
or

(iv) real property situated outside Canada, or any leasehold interest in such property;

(d) subject to subsections (7) and (8), the number of shareholders of the corporation was not less than twenty and no one shareholder held more than 25% of the issued shares of the capital stock of the corporation;

(e) any holders of preferred shares of the corporation had a right, after payment to them of their preferred dividends, and payment of dividends in a like amount per share to the holders of the common shares of the corporation, to participate *pari passu* with the holders of the common

shares in any further payment of dividends;

(f) the cost amount to the corporation of such of its property as consisted of

(i) debts owing to the corporation that were secured on residential property, as defined in the *Residential Mortgage Financing Act*, whether by mortgages or hypothecs or in any other manner, and

(ii) amounts of any deposits standing to the corporation's credit in the records of

(A) a bank or other corporation any of whose deposits are insured by the Canada Deposit Insurance Corporation or the Quebec Deposit Insurance Board, or

(B) a credit union within the meaning assigned by subsection 137(6),

plus the amount of any money of the corporation was at least 50% of the cost amount to it of all of its property;

(g) the cost amount to the corporation of all real property of the corporation, including leasehold interests in such property, (except real property acquired by the corporation by foreclosure or otherwise after default made on a mortgage, hypothec or agreement of sale of real property) did not exceed 25% of the cost amount to it of all of its property;

(h) its liabilities did not exceed 3 times the amount by which the cost amount to it of all of its property exceeded its liabilities, where at any time in the year the cost amount to it of such of its property as consisted of property described in subparagraphs (f)(i) and (ii) plus the amount of any money of the corporation was less than 2/3 of the cost amount to it of all of its property; and

(i) its liabilities did not exceed 5 times the amount by which the cost amount to it of all of its property exceeded its liabilities, where paragraph (h) is not applicable.

How
share-
holders
counted

(7) For the purposes of paragraph (6)(d), a trust governed by a registered pension plan or deferred profit sharing plan by which shares of the capital stock of a corporation are held shall be counted as four

shareholders of the corporation, and a trust governed by a registered retirement savings plan by which shares of the capital stock of a corporation are held shall be counted as one shareholder thereof; but for the purpose of calculating the limitation on the holding of shares of the capital stock of a mortgage investment corporation by a trust governed by a registered pension plan or deferred profit sharing plan, the trust shall be counted as one shareholder.

First taxation year

(8) For the purposes of subsection (6), a corporation that was incorporated after 1971 shall be deemed to have complied with paragraph (6)(d) throughout the first taxation year of the corporation in which it carried on business if it complied with that paragraph on the last day of that taxation year.

Definitions

"Liabilities"

(9) In this section,

(a) "liabilities" of a corporation at any particular time means the aggregate of all debts owing by the corporation, and all other obligations of the corporation to pay an amount, that were outstanding at that time; and

"Taxed capital gains"

(b) "taxed capital gains" has the meaning assigned by paragraph 130 (3)(b)."

(2) Subsection (1) is applicable to any taxation year of a mortgage investment corporation commencing after 1971.

(3) Subsection 184(2) and subsections 185(1) and (2) of the *Income Tax Act* are repealed and the following substituted therefor:

Tax on excess of capital dividend or capital gains dividend paid by corporation

"(2) Where a corporation has elected in accordance with subsection 83(2), 130.1(4) or 131(1) in respect of the full amount of any dividend payable by it on shares of any class of its capital stock and the full amount of the dividend exceeds the portion thereof deemed by that subsection to be a capital dividend or a capital gains dividend, as the case may be, the corporation shall, at the time of the election, pay a tax under this Part equal to

(a) where the corporation has elected in accordance with subsection 83(2), the amount of the excess;

(b) where the corporation has elected in accordance with subsection 130.1(4), 3/4 of the excess; and

(c) where the corporation has elected in accordance with subsection 131(1), 1/3 of the excess.

Assessment of tax

185. (1) The Minister shall, with all due dispatch, examine each election made by a corporation in accordance with subsection 83(1) or (2), 130.1(4) or 131(1), as the case may be, assess the tax payable under this Part, if any, in respect of the election and send a notice of assessment to the corporation.

Payment of tax and interest

(2) Where an election has been made by a corporation in accordance with subsection 83(1) or (2), 130.1(4) or 131(1), as the case may be, the corporation shall, within 30 days from the day of the mailing of the notice of assessment under this Part in respect of the election, pay to the Receiver General of Canada the portion of the assessed tax and penalties then remaining unpaid whether or not an objection to or appeal from the assessment is outstanding and shall, in addition, pay interest on that portion at a prescribed rate per annum from the day of the election until the day of payment whether or not it was paid within the period of 30 days."

(4) Subsection 212(2) of the *Income Tax Act* is repealed and the following substituted therefor:

Tax on dividends

"(2) Every non-resident person shall pay an income tax of 25% on every amount that a corporation resident in Canada pays or credits, or is deemed by Part I to pay or credit, to him as, on account or in lieu of payment of, or in satisfaction of a taxable dividend (other than a capital gains dividend within the meaning assigned by subsection 130.1(4), 131(1) or 133(7.1)) or a capital dividend."

Appendix G

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